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MAKING TEXTILES IN PRE-ROMAN AND ROMAN TIMES

People, Places, Identities



Edited by
Margarita Gleba and Judit Pásztókai-Szeőke

ANCIENT TEXTILES SERIES VOL. 13

MAKING TEXTILES

IN PRE-ROMAN AND ROMAN TIMES
PEOPLE, PLACES, IDENTITIES

edited by

Margarita Gleba and Judit Pásztókai-Szeőke

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Contents

Preface

by *Margarita Gleba*

Maps

Introduction

by *John Peter Wild*

1. Transformations in Textile Production and Exchange in pre-Roman Italy
by *Margarita Gleba*
2. Textile Making in Central Tyrrhenian Italy – Questions Related to Age, Rank and Status
by *Sanna Lipkin*
3. Discovering the People behind the Textiles: Iron Age Textile Producers and their Products in Austria
by *Karina Grömer*
4. Textile Production and Trade in Roman Noricum
by *Kordula Gostenčnik*
5. Craftspeople, Merchants or Clients? The Evidence of Personal Names on the Commercial Lead Tags from Siscia
by *Ivan Radman-Livaja*
6. Female Work and Identity in Roman Textile Production and Trade: A Methodological Discussion
by *Lena Larsson Lovén*
7. Trade, Traders and Guilds (?) in Textiles: the Case of Southern Gaul and Northern Italy (1st-3rd Centuries AD)
by *Jinyu Liu*
8. Textile Trade in the *Periplus of the Erythraean Sea*
by *Manuel Albaladejo Vivero*
9. Textiles and their Merchants in Rome's Eastern Trade
by *Kerstin Droß-Krüpe*
10. (In)visible Spinners in the Documentary Papyri from Roman Egypt
by *Sophie Gällnö*

11. Textile Production Centres, Products and Merchants in the Roman Province of Asia
by *Isabella Benda-Weber*
12. *Ulula*, *Quinquatrus* and the Occupational Identity of *Fullones* in Early Imperial Italy
by *Miko Flohr*
13. A 'Private' Felter's Workshop in the Casa dei Postumii in Pompeii
by *Jens-Arne Dickmann*

Preface

Textile production is an economic necessity that has confronted all societies in the past. Although different cultures have found different solutions to the problem, most have combined production and trade to varying degrees. While most textiles were manufactured at a household level, valued textiles in particular were traded over long distances and this was influenced by raw material supply and costs, labour skills and costs as well as tradition.

In the Mediterranean regions, the evidence for textile trade is especially abundant for the Roman times, well documented by the archaeological finds and written sources. Documents such as *Periplus Maris Erythraei* or Diocletian's Edict of Prices illustrate the typological and geographical diversity of textile commodities that circulated within and beyond the Roman Empire. They make it possible to identify regional products, to locate production centres and to obtain information on the organisation and infrastructure of production and trade.

The present volume originates in a workshop "Work and Identity: The agents of textile production and exchange in the Roman period", which took place on 7 June 2009 in Hallstatt, Austria. The workshop was organised by Study Group E (Production and Trade) of the international project *Clothing and Identities in the Roman World* (DressID). The aim of this study group during 2008–2010 was to approach the investigation of textile production and trade in the Roman Empire and beyond its borders by focusing in particular on the identity of the agents involved in these activities, i.e. textile producers, traders and consumers. Some of the questions explored were: who produced and distributed textiles and clothing; how was production organised; what was the social status of the agents involved and could it change during their working life; how did their profession affect personal identity.

While most of the articles in this volume originated as papers during the workshop in Hallstatt, several contributions were added during the editing process in order to broaden the scope of the topic (Radman-Livaja, Larsson Lovén, Gällnö, Dickmann). Furthermore, while the volume focuses on the Roman period, some articles address the issues connected to textile production and trade during the preceding period (Gleba, Lipkin, Grömer).

Each essay is a separate chapter with footnotes and bibliography. We have attempted to be consistent, while keeping the individual authors' styles, including their choice of American or British orthography and punctuation. Our thanks go to non-native English speakers for writing in English or having their contributions translated into English. Latin and Greek sources are abbreviated according to *The Oxford Classical Dictionary*. Other common abbreviations include:

Année épigraphique

Corpus Inscriptionum Graecarum

Corpus Inscriptionum Latinarum

~~IL~~~~LP~~~~ON~~ *num Lapidarium Latinarum Provinciae Norici*
~~HS~~Dessau, ed., *Inscriptiones latinae selectae* (1892–1916)
~~I~~*nscriptiones Graecae*
~~O~~~~f~~ *ford Latin Dictionary*
~~RE~~~~S~~allwell et al., eds, *Princeton Encyclopedia of Classical Sites* (Princeton 1976)
~~SE~~*plementum Epigraphicum Graecum*
~~T~~*hesaurus Linguae Latinae*

The workshop and the publication of the present volume were generously funded by the European Education, Audiovisual and Culture Executive Agency's DressID project and the Danish National Research Foundation's Centre for Textile Research. We also wish to thank the organisers of the DressID meeting in Austria, Karina Grömer and Anton Kern (Natural History Museum in Vienna) for all the logistical support in Hallstatt; Cherine Munkholt (CTR) for her invaluable help with editing; John Peter Wild for writing the introduction to the volume; and Yevgeny Kokorin for creating the maps.

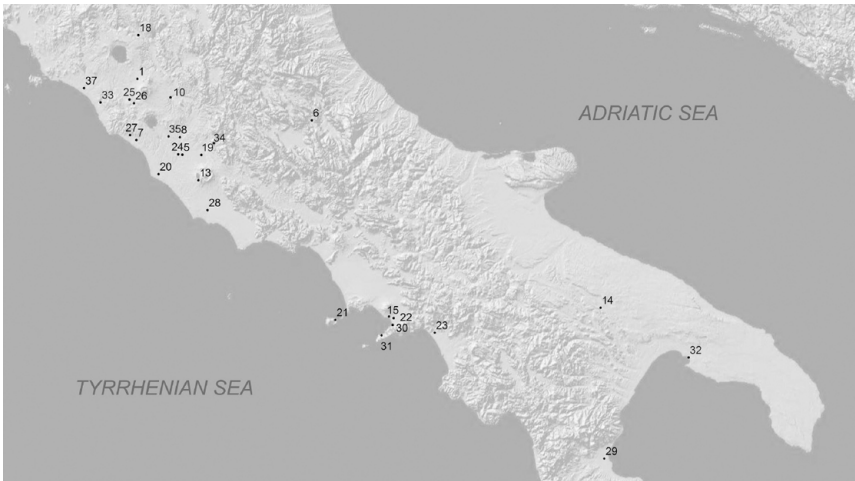
Margarita Gleba

10 September 2012

MAPS

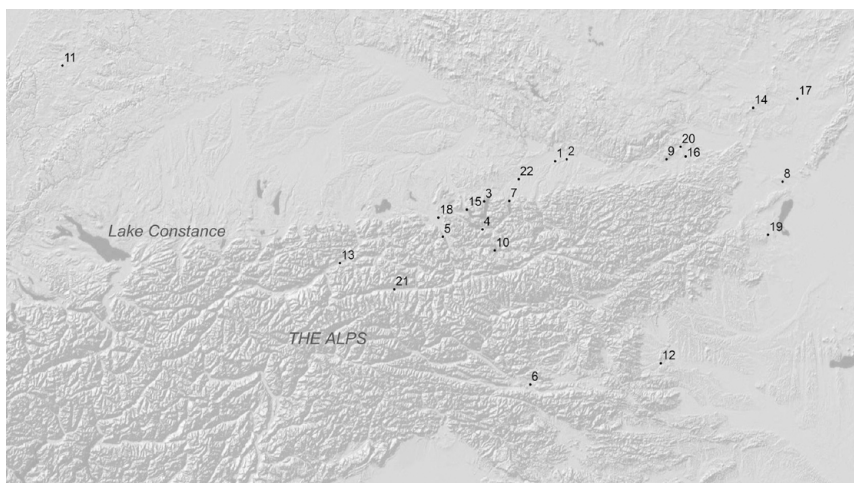


Map I: a. North Italy. Sites mentioned in Chapters 1, 2, 6, 12 and 13 (key on page ix).



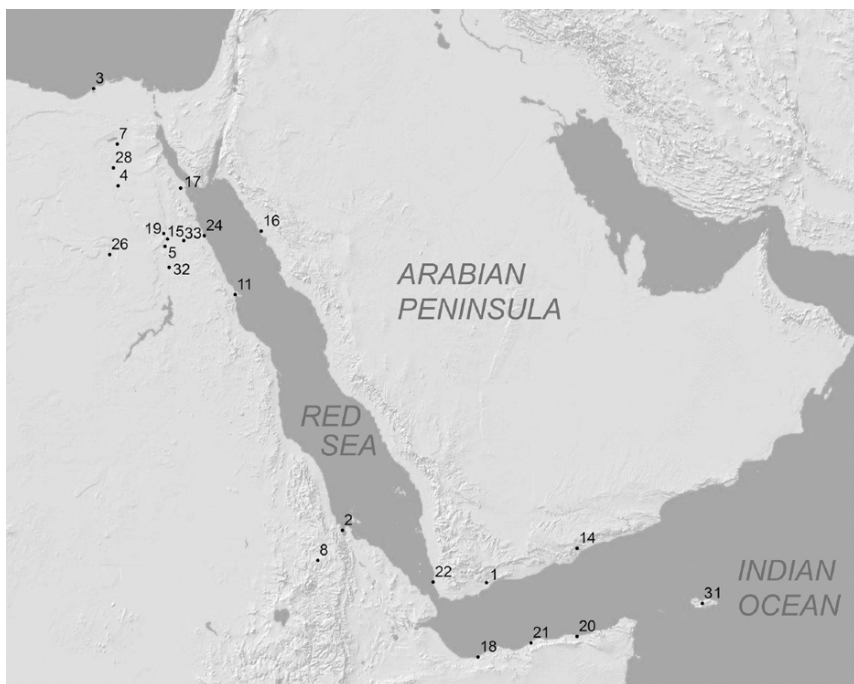
Map I: b. South Italy. Sites mentioned in Chapters 1, 2, 6, 12 and 13.

- 2 *Aquileia*
- 3 *Bisenzio*
- 4 *Bologna*
- 5 *Caracupa*
- 6 *Castelvecchio Subrego*
- 7 *Cerveteri (Caere)*
- 8 *Crustumerium*
- 9 *Este*
- 10 *Ficana*
- 11 *Fiesole*
- 12 *Florence*
- 13 *Gabii*
- 14 *Gravina di Puglia*
- 15 *Herculaneum*
- 16 *Milan*
- 17 *Murlo*
- 18 *Orvieto (Volsinii)*
- 19 *Osteria dell'Osa*
- 20 *Ostia*
- 21 *Pithekoussai*
- 22 *Pompeii*
- 23 *Pontecagnano*
- 24 *Rome*
- 25 *San Giovenale*
- 26 *San Giuliano*
- 27 *Sasso di Furbara*
- 28 *Satricum*
- 29 *Sibari*
- 30 *Stabiae*
- 31 *Sorrento (Surrentum)*
- 32 *Taranto*
- 33 *Tarquinia*
- 34 *Tivoli*
- 35 *Veii*
- 36 *Verucchio*
- 37 *Vulci*

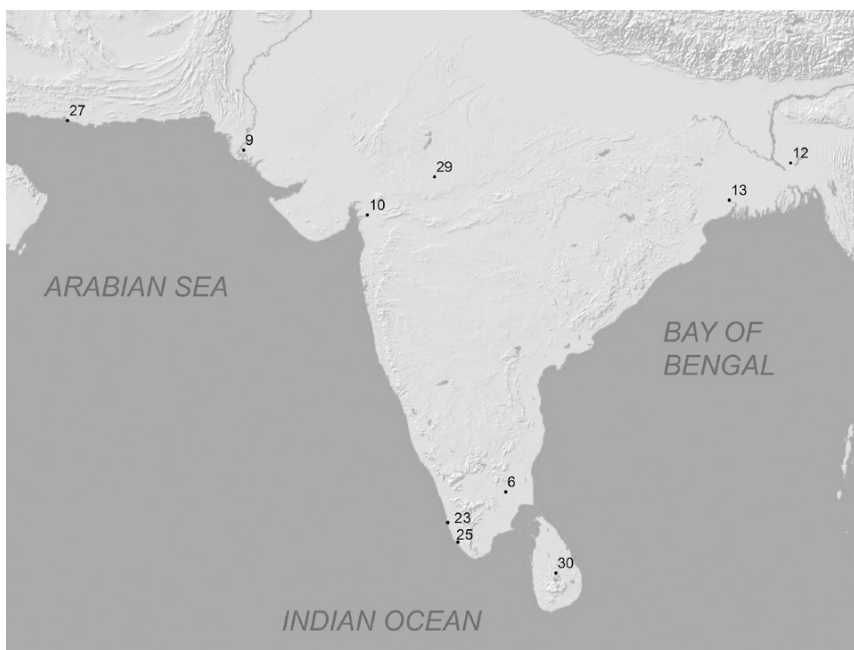


Map II. Central Europe. Sites mentioned in Chapter 3.

- 1 *Anselden*
- 2 *Asten*
- 3 *Attersee*
- 4 *Dammwiese*
- 5 *Dürrenberg*
- 6 *Frög*
- 7 *Gmunden*
- 8 *Göttlesbrunn*
- 9 *Hafnerbach*
- 10 *Hallstatt*
- 11 *Hochdorf*
- 12 *Kleinklein*
- 13 *Kundl*
- 13 *Michelstetten*
- 15 *Mondsee*
- 16 *Pottenbrunn*
- 17 *Rabensburg*
- 18 *Salzburg*
- 19 *Sopron*
- 20 *Statzendorf*
- 21 *Uttendorf im Pinzgau*
- 22 *Waschenberg*



Map IIIa. Africa and Arabian Peninsula (key on page xiii).



Map IIIb. Indian subcontinent (key on page xiii).

Key to Map III: a. Africa and Arabian Peninsula; b. Indian subcontinent. Sites mentioned in Chapters 8, 9 and 10 (modern names in brackets).

- 1 Aden
- 2 Adulis
- 3 Alexandria
- 4 Antinoopolis (Sheikh Ibada)
- 5 Apollinopolis Magna (Edfu)
- 6 Argaru (Uraiyur) region
- 7 Arsinoe/Ptolemais Euergetis
- 8 Axum
- 9 Barbaricum (Bahardipur)
- 10 Barygaza (Broach)
- 11 Berenike
- 12 Dacca (Dhaka)
- 13 Ganges – river
- 14 Kanê (Qana)
- 15 Koptos (Qift)
- 16 Leukè Kome (Al Wahj)
- 17 Leukos Limen ?
- 18 Malaô
- 19 Médamoud
- 20 Mosyllon (Elayu)
- 21 Mundu (Bandar Heis)
- 22 Muza (Al Mukha – Mocha)
- 23 Muziris (Cranganur)
- 24 Myos Hormos (Quseir al-Qadim)
- 25 Nelkynda (Niranam)
- 26 Oasis Magna (Kharga Oasis)
- 27 Omana
- 28 Oxyrhynchos
- 29 Ozênê (Ujjain)
- 30 Palaisimundu/Taprobânê (Sri Lanka)
- 31 Dioskouridou (Soqotra)
- 32 Tentyris (Denderah)
- 33 Wadi Menih

Introduction

John Peter Wild

Who were the textile producers and traders in the Roman world? This is an apparently innocent question, but not one that has been addressed before in a dedicated volume. It is very much in tune, however, with the theme of DressID, the abbreviated title of the European Culture Programme on 'Clothing and Identities: New Perspectives on Textiles in the Roman Empire'. Archaeology, anthropology, history and related disciplines have all developed in recent years a preoccupation with the concept of 'identity' in their respective fields, often as a fresh, innovative, way of revisiting familiar source material, the interpretation of which has become stale.

As several of the contributors to this volume have noted, textile production and exchange, and the people behind the processes, tend to suffer from a low profile in general studies of the ancient world. The principal reason for this – but by no means the only reason – is the undeniable paucity and unevenness of the surviving archaeological and (to a lesser extent) the documentary evidence, coupled with the perceived difficulty of understanding ancient craft practices. Some sixty years ago, however, there was a similar attitude to the whole of the Roman economy: Tenney Franks' bland survey (1933–1940) of the scattered fragments of information seemed the best that could be done. More recently, some bolder spirits have grasped the nettle and, having the advantage of somewhat richer source material – particularly from archaeology – have erected what earlier generations would have regarded as a house of cards, tackling cruces such as the size of the Roman Gross National Product. 'Identity' may seem a will-o'-the-wisp, but the very exercise of chasing it can lead to exciting new perceptions.

In 1960 Hugo Jones published 'The cloth industry under the Roman Empire'. For all its shortcomings, it was the first acknowledgement from a senior ancient historian that the topic could repay attention. There was even a glimpse of 'identity': Florentius of Hippo, a poor man, lost his *casula*, but found a fish which he sold and with the cash bought wool for his wife to make him a substitute 'as best she could' (Jones 1960, 184; Brunt 1974, 352).

Jones took a conservative view of the importance of industrial activities to the Roman economy. The modernist school on the other hand seek inspiration in the wider sphere of pre-Industrial Revolution economies and take a maximalist view. In proposing models for the Roman textile industry, however, in the light of its more richly documented counterpart in Medieval Europe, some have failed to note the significant differences between the two which can be attributed in large measure to the advances in textile technology and equipment. The prime distinction was pointed out by Hero Granger-Taylor in 1982: most Roman clothing was woven to shape on the loom and required minimal tailoring before being worn. Medieval clothing by contrast was cut from a web of cloth and sewn

together to achieve the intended shape – a change linked to the development of the broad horizontal handloom. It is no surprise therefore to find that Roman traders dealt in complete garments, while bolts of cloth ('Meterware') characterised the Medieval market. It is an uphill battle, however, to persuade modern commentators *not* to talk in terms of Roman bolts of cloth!

Professional occupation helped to define personal identity in antiquity, as Miko Flohr points out in this volume, and it is implicit in the volume's title. Without some specific form of declaration or representation of an occupation, most Roman textile workers have remained literally anonymous. Comparatively few figures in the industry are known to us by name, and consequently many of the authors below approach the issue of identity by a roundabout route, using production processes and their archaeology as the starting point.

In prehistory this is the only approach possible. In a succinct and authoritative survey of Italian textile-making in the 1st millennium BC, focussing on loom-weights and the whole range of textile implements, Margarita Gleba (Chapter 1) shows how the foundations for the later industry in the heartland of the Empire were already being laid. Over and above the low-technology subsistence products, a new stratum of high-quality high-status textiles, the work of specialists, emerges, exemplified by the remarkable garments in the tombs at Verucchio in north-east Italy including what may be the forerunner of the Roman toga. Graves dating to the earlier 1st millennium BC in Latium and south Etruria were furnished in some cases with implements symbolising their owner's connection with spinning and weaving, and Sanna Lipkin (Chapter 2) argues that the statistics gleaned from bone analysis reveal useful facts about the age and status of the deceased.

Another essential preliminary review, in this case setting the scene for the accounts that follow of Roman textile manufacture in the provinces along the Danube, is devoted by Karina Grömer to the Iron-Age textile producers of Austria (Chapter 3): the textiles from the well-known salt-mines of Hallstatt and Dürrnberg are currently the focus of a major research programme. Twill weave and its variants characterise the Hallstatt corpus (800–450 BC), but in the La Tène at Dürrnberg (450–15 BC) plain tabby weave takes over – an indication arguably of increasing standardisation, even of specialisation.

The Roman trading outpost on the Magdalensberg (c. 50 BC to at least 15 BC) stands at the interface of the Central European Iron Age and the Roman advance to the Danube in what became the province of Noricum. Kordula Gostenčnik (Chapter 4) examines the very extensive collection of textile implements from the site which represent virtually every aspect of manufacture and then turns her attention to the more meagre finds from urban and villa sites to arrive at a general overview of Norican textile output. By the time of Diocletian's Edict (AD 301) Noricum may have become a textile backwater, but the listing there of its enigmatic *banata* and *fedox* echo old regional traditions (*Edictum Diocletiani* XIX, 55, 56).

What role did women play in the provision of clothing? Lena Larsson Lovén tackles this topic for the western provinces on the basis of iconography and inscriptions, often funerary. Each source presents its own problems: the short-cut symbolism of the art needs decoding, while the meanings of many of the technical terms in the inscriptions are opaque. Women were responsible for all the yarn spun (the wool at least), and much of the weaving. Gender roles were not rules,

however, and women crop up across the whole manufacturing spectrum. Yet the spinning sorority was seen but not heard, except where there was a commercial dimension to what they did. Sophie Gällnö (Chapter 10) discusses some of the documented spinners of Roman Egypt, each of whom exhibits a quiet confidence in their roles.

The place of child labour in textile manufacture is not a topic raised in this volume. Yet the young carpet-weavers of India and the children employed until comparatively recent times in the cotton and woollen mills of Europe had their counterparts in antiquity. Life expectancy was low, and any contribution to a poor family's income could be crucial. In a brief discussion of child labour in 1985, Bradley drew attention to the apprentice contracts for would-be weavers in Roman Egypt (Bradley 1985; Droß-Krüpe 2011, 103–120); but they are just the tip of the iceberg.

Clothing, soft furnishings, yarn and prepared raw materials were objects of trade and exchange in every corner of the Roman Empire, and far beyond it into India and Central Asia. The evidence comprises the traded goods – where conditions suitable for preservation exist – and a wealth of documentary and epigraphic sources. Goods travelling over a distance usually went by river and/or sea, parasitic on other types of cargo. Merchants, ship-owners and their financial backers took tremendous risks. For the particularly risky trade down the Red Sea and across the Indian Ocean a kind of 'Rough Guide' survives, the *Periplus Maris Erythraei*, described below by Manuel Albaladejo in Chapter 8. The name of the guidebook's author is unknown, but his business acumen and experience, and his enquiring mind and curiosity, are apparent. The theme of trade with India is taken up again by Kerstin Droß-Krüpe in the next chapter, in which she combs the epigraphic and papyrological records of Egypt for those with first-hand acquaintance with the route of the *Periplus*. Communities of Indian shippers and crew are archaeologically attested at the Red Sea posts: whether there were corresponding Roman entrepreneurs in residence in India is a moot point.

Trading conditions within the Roman frontiers were calmer. Numerous merchants, declaring themselves specialists in one or other type of Roman garment, travelled across the western provinces and north Italy, and Jinyu Liu examines their activities in Chapter 7. She advances cogent arguments against Jongman's belief in large-scale trade in wool in north Italy, and raises questions about how Roman *collegia* functioned: were they really so different from Medieval guilds? The Lykos Valley in the old senatorial province of Asia was home to some of the most renowned textile towns in the Empire, the subject-matter of Isabella Benda-Weber's encyclopaedic contribution. The list of their output is long – and often mystifying.

Roman fullers seem to have been comparatively well-off, especially in Italy, and their *collegia* influential in local politics. Their corporate spirit, Miko Flohr argues in Chapter 12, was fostered by their devotion to the cult of Minerva and her owl ('Fabius Tu-whit Tu-whoo' sounds like a private joke). He explores the theoretical issues surrounding group identity and team building.

The fullers' investment in plant – and water resources – meant that they worked at arm's length from the rest of the textile industry; but they depended on a steady stream of customers bringing garments for treatment – wet cleaning, bleaching, texture and lustre restoration. The garments deposited were often identified by a

tag, tied on with string, which gave the owner's name, the item's name, colour, weight and the cost of treatment. All this is revealed by a remarkable series of lead tags from Siscia, discussed in Chapter 5 by Ivan Radman-Livaja, who has assembled a considerable body of comparanda. Textile processing plants in urban contexts tend to be ramshackle, pushed into odd corners in buildings and difficult to interpret. Jens Arne Dickmann, in the closing chapter, proposes that the 'washing tables' associated with heated cauldrons in the Casa dei Postumii in Pompeii belonged to a felt-maker's workshop. Those looking for wool-washing tables might disagree, but only further debate might settle the issue.

An after-thought: one famous personality, arguably the best-documented weaver of Classical Antiquity, is strangely missing from this identity-centred book: Tryphon, son of Dionysius, weaver of Oxyrhynchus. Born c. AD 8/9 into a weaving dynasty, he comes vividly to life in an archive of some 40 papyri, in part down to his litigation to sort out his less-than-happy domestic affairs (Parsons 2007, 211–216). Describing himself as 'of middle height, honey-coloured, long-faced, slightly squinting, with a scar on the right wrist', in Peter Parson's translation, he had developed a cataract and become short-sighted by the age of 44. The archive has little to say about his professional life, apart from the purchase of a small upright loom in c. AD 54 (P.Oxy. 2, 264). He might have been surprised at finding himself an icon for the Roman textile industry.

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1. Transformations in Textile Production and Exchange in pre-Roman Italy

Margarita Gleba

Introduction

As an item of consumption, textiles range between luxury and necessity and are ideal for the creation of specialised products, the manufacture of which may be narrowly localised. Such a localisation creates demand and necessitates redistribution, resulting in textile trade. Hence, two developmental directions can be observed. The first is towards the production of luxury items needed for status display and (long-distance) gift exchange between elites, which leads to the development of highly specialised/skilled craftsmanship and a network of exchange and resource and object circulation, which can be archaeologically traced through the distribution of objects. The second is directed towards the swift production of necessity goods demanded by growing urban communities. This in turn leads to a development of more organised modes of production and trade in these necessity products. Unlike many other specialised crafts that appeared in Mediterranean Europe during the first half of the 1st millennium BC (e.g. glass or certain metal and pottery types), textile production was not a new craft. Instead, part of the production shifted from making subsistence products to the manufacture of non-essential or luxury goods. Thus, in addition to the adoption of new weaving techniques, technological changes were also induced by an organisational shift in production, i.e. a change in purpose, intensity and scale of organisation of textile production. As such, textiles present a special case in the production system of pre-Roman Italy.

Pre-Roman Italy: Economic and Social Transformations

The period from the 10th through the 7th centuries BC in the Apennine Peninsula was the time of development from small villages of mostly egalitarian type, to large urban centers with social stratification and specialised crafts (e.g. Guidi 1998).¹ The process of urbanisation was accompanied by important technological transformations, illustrated qualitatively and quantitatively by the excavated artefacts. Organised production intensified steadily during these centuries, as did commercial exchange throughout and beyond the Mediterranean sphere. The growing mobility, particularly visible in Greek and Phoenician movements across the Mediterranean from the end of the Bronze Age (1200–1000 BC), set in motion “material and nonmaterial transformations which affected the socio-political relations of nucleated communities” during their urbanisation (Riva 2010). Urban

centres benefited from this mobility and the accessibility to, and exploitation of resources that it fuelled. The urban network in turn encompassed the entire Mediterranean and stimulated contacts and cultural interaction that culminated in the first common pan-European culture, the Orientalising phenomenon, which was based on the widespread circulation of luxury and prestige objects, many of which were imported from the eastern Mediterranean and the Near East, i.e. the Orient (Riva 2005). Such goods now became indispensable elements that defined and legitimised aristocrats and in turn inspired local craftspeople to take up new techniques and produce works in similar style.

The communities of the small and large urban centres of the Early Iron Age Italy required great quantities of textiles and were pressed to organise their consumption not only on the basis of local agro-pastoral activities but also through exchange. The transition from a 'rural economy' to 'urban economy' involved intensification of agricultural production including that of textile fibres. The qualitative changes in textile production are reflected in the development of better raw materials (e.g. sheep wool, cf. Gleba 2012), which allowed faster processing and production, as well as more complex techniques and patterns. The quantitative changes are demonstrated by the deposition (i.e. taking out of circulation) of substantial quantities of textiles in burials, e.g. at Verucchio in Italy (von Eles 2002) and, later, sanctuaries, as known from ancient written sources.

Technological Changes

The archaeological evidence indicates the development of new or more effective production processes, standardisation and manufacture of objects for specific purposes. Such developments occurred primarily under the patronage of elites and were motivated by the need to produce status markers and prestige goods (Nijboer 1997). Textiles were undoubtedly among the most important of these status markers, being a medium which made up perhaps the largest proportion of the visual environment of urban antiquity and constituting in clothing a crucial expression of identity. The display of luxury and prestige goods as seen in the archaeological record is closely mirrored in the behaviour of warrior aristocracies in the Homeric poems and reflects the ideological system underlying the behaviour, beliefs and values of Orientalising Mediterranean elites (Riva 2005). The common culture and ideology are also reflected in the burial customs of the elites, indicating that the horizontal ties which bound people of similar social status were much more important than the vertical ties linking them with their own communities (similar to the later European royal houses). The central role of women, both in the establishment of aristocratic ties through intermarriage and in textile production in Early Iron Age Italy, raises important questions regarding the modes of transmission not only of textile technologies but also of fashion.

The transformation of raw materials into final product involves a set of technologies and organisation on the part of a producer who possesses certain skills and recipes. Technology may be defined as "a corpus of artefacts, behaviours, and knowledge for creating and using products that is transmitted intergenerationally" (Schiffer and Skibo 1987). Thus, information about technology can be deduced from every archaeological artefact. Artefacts, in turn, represent a part of technology which can be recovered archaeologically, and, through their variability, attest to technological changes. Beyond the material

aspects of technology, the technical decisions a craftsperson makes are also embedded in the worldviews, cultural practices and social relations of a given society (Lemonnier 1986; Dobres 2000). Changes in technology may hence be caused by experimentation, change in demand involving a product's function, or economic processes such as competition (Schiffer and Skibo 1987; van der Leeuw and Torrence 1989).

Animal Husbandry

Procurement of raw materials is the first step of any craft. While the data are insufficient to support any conclusions about transformations in flax cultivation in pre-Roman Italy (cf. Gleba 2004), changes in wool production can be traced archaeologically through bone assemblages. Thus, analysis of the animal bone data from the settlements of Central Tyrrhenian and Adriatic Italy demonstrated an increase in ovicaprids "from 23.1% in the Middle Bronze Age, to 34.2% in the Recent Bronze Age and 49.7% in the Final Bronze Age" (de Grossi Mazzorin 2001, 325 and 326, table 2). This increase in sheep numbers has been interpreted as part of the wealth accumulation of the emerging aristocracy (de Grossi Mazzorin 2001, 325). More significant are the mortality data, which indicate that, starting in the Early Iron Age, sheep were being reared increasingly for wool, as demonstrated by the large number of old animals present in the assemblages (Barker and Rasmussen 1998, 73; de Grossi Mazzorin 2001, 327 and 326, fig. 1).

The question of sheep breeds is even more complex, and it is relevant to the discussion of wool qualities. Ancient literary sources indicate that, by the beginning of the Common Era, different qualities of wool were available to Roman consumers and many of the best fibres were produced in Italy, from where they spread throughout the Roman Empire in the form of sheep, raw materials or finished textiles (Frayn 1984; Jongman 2000; Vicari 2001; Gleba 2008, 74). Indeed, the analysed Roman textiles from various geographical locations demonstrate a wide range of wool qualities (e.g. Bender Jørgensen and Walton, 1986, 179; Ryder, 1981; Ryder, 1983, 177–180). The variety observed during the Roman times reflects a long period of evolution, based on selective breeding and the development of processing technologies. It is likely that, already in the Early Iron Age, intensive selective breeding was aimed at producing fleeces with specific qualities that would permit the manufacture of highly specialised and differentiated textiles. In fact, a recent diachronic investigation of wool quality from a variety of Italian pre-Roman sites demonstrates the development of sheep fleece from primitive Bronze Age wool with very fine underwool and very coarse kemps to the disappearance of kemp and more uniform fleece (Gleba 2012). By the end of the Iron Age, several fleece qualities coexisted in Italy, suggesting the presence of different sheep varieties.

Increase in the Number and Standardisation of Tools

The increase in sheep bone percentages correlates with the large numbers of textile implements found on settlement sites. Textile tools are ubiquitous at archaeological sites throughout Italy and often constitute the single most important and plentiful type of evidence for the assessment of the scale of textile production and technology at a given site (Gleba 2008). These implements include tools associated with various stages of textile manufacture: the preparation of

fibres (shears), spinning of yarn (spindle whorls), weaving of fabric (loom weights), and secondary processes such as sewing (needles).

Large concentrations of spindle whorls and loom weights indicate a greater intensity of spinning and weaving activities. The increase in the numbers of textile implements is furthermore accompanied by their standardisation in shape and size and particularly in a general decrease in size that indicates finer products and higher expertise. At Poggio Civitate di Murlo, for example, the vast majority of spindle whorls are small and over 90 % of them are of the same truncated conical shape (Fig. 1.1; Gleba 2000). Loom weights found at the contemporary site of Acquarossa, similarly, have very uniform sizes and shapes (Fig. 1.2; Östberg 1975). Since such uniformity is not essential for weaving itself, it is likely that it is due to the general standardisation of loom weight production. Compared to the preceding periods, implements were probably increasingly produced by specialist craftspeople, such as potters and coroplasts in the case of clay tools, and smiths in the case of metal implements. The standardisation of tools thus indicates that they were produced on a larger scale than before, corresponding to the intensification of textile making activities and a demand for the appropriate equipment. Such a demand would be especially high in urban areas.



Fig. 1.1. Ceramic spindle whorls, Poggio Civitate di Murlo, 7th-6th century BC. (Courtesy of Anthony Tuck, Poggio Civitate Excavation Project).



Fig. 1.2. A group of loom weights found in situ, Casa A, Zona B, Acquarossa, 6th century BC. (After Östenberg 1975, 79).

New Tools

In addition to the standardisation of the old implements, certain new tools make their appearance during the period under discussion, indicating new techniques and, consequently, new or improved products. Thus, shears came into use in the Iron Age (Fig. 1.3), revolutionising the way raw wool was collected and possibly triggering the development of new breeds of sheep with non-shedding fleece (Ryder, 1992 137). The introduction of shears most likely resulted in the intensification of wool production.

The appearance of spools (Fig. 1.4) in the Final Bronze Age corresponds to the advent of tablet weaving in Italy, which is of particular relevance to luxury and ceremonial textile production (see below; on tablet weaving, cf. Ræder Knudsen 2012). The fact that they are found in earlier contexts in the north seems to indicate that the technique arrived from Europe via the Alps. The presence of spools in the Early Iron Age contexts of southern Italy points to a rapid spread of this new technology throughout the peninsula, which most likely occurred through intermarriage or, alternatively, through slave trade.

New Textiles

One of the major turning points in textile history is the appearance of twill. Twill comes into use by the Urnfield period in Europe (9th-8th centuries BC),² starting what Bender Jørgensen has termed as “the twill horizon” (Bender Jørgensen 1992, 120). Different types of twills developed in different geographical areas. In Italy, spin-patterned twill in single yarns of medium or fine quality, termed the Vače type, is present in its fully developed form at Sasso di Furbara and Verucchio that is, by the late 9th-8th centuries BC. This type of twill is otherwise common in the Eastern Hallstatt area (Bender Jørgensen 1992, 122–123; cf. Grömer in this volume).

Twill requires a loom with a more complex set up including four or more sheds, marking the appearance of more complex technology. Multiple sheds may result in more than two rows of loom weights, archaeologically recoverable in primary settlement contexts. Since fewer threads would be attached to each loom weight, the implements would decrease in size and increase in number. Being a denser kind of weave, twill requires more yarn, leading to more intensive spinning activity. Finally, wool fibres are very elastic, making it a much more suitable fibre for weaving textiles in twill binding (Bender Jørgensen 1992, 120; Rast-Eicher 2005, 128). Thus, the growth in percentage of ovicaprids in animal bone assemblages and the increase in implement numbers documented at the same time as twill makes its appearance throughout Europe may indicate a cause-effect relationship between the new weaving technique and changes in textile production in early 1st millennium BC Italy.

In addition to a variety of twills, other types of weaves become ‘standard in various areas of Europe in the early 1st millennium BC. One such weave, common in Central Europe, is the Döhren type, a tabby with plied yarn in one or both systems (Bender Jørgensen 1992, 122). This type of weave is already present in Italy at Sasso di Furbara. Plain tabby z/z fabrics found in Central Europe are often linen (Bender Jørgensen 1992, 125). Such z/z tabbies, often reps, have been identified in Orvieto, Veii and Satricum (Gleba 2008, 83).

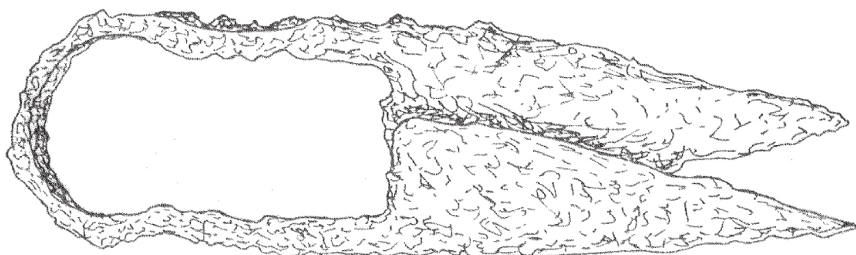


Fig. 1.3. Iron shears from Tomb 2, Persona, Ornavasso, 4th-1st century BC (After Graue 1974, pl. 52).



Fig. 1.4. Ceramic spools, Poggio Civitate di Murlo, 7th-6th century BC. (Courtesy of Anthony Tuck, Poggio Civitate Excavation Project).

Another technical innovation, as already mentioned, was a tablet-woven textile. The mantles and tunic-shaped garments found at Verucchio have been demonstrated to be ceremonial garments (Stauffer 2002; 2012) and their tablet-woven borders appear to be status markers with not only their presence but also their width bearing significance. The specifics of the presence of spools in Early Iron Age burials of Italy (Gleba 2009a) and the ubiquitous presence of decorated borders in contemporary garment representations further argue that these borders were not purely decorative but communicated a very clear and important message of status not only to the inhabitants of the Apennine Peninsula but also among other European Early Iron Age cultures. Tablet-woven borders are also found on textiles from the princely burials in Central and Western Europe (e.g. Hallstatt, Austria; Hochdorf and Hohmichele, Germany; El Cigarralejo, Spain; cf. Raeder Knudsen 2012, 262). Moreover, the toga, the Roman descendant of the Verucchio mantles, retained the border as the status symbol, in this case dyed purple.

The presence of these 'standard' Central European weaves in Italy indicates a wide spread of textile techniques and far-reaching networks of material and information exchange, to which I shall return later. The connection with Central Europe is not surprising since, already in the Early Bronze Age, Italian textile technology demonstrates many similarities with the Neolithic and Bronze Age Swiss material (Barber 1991, 174; Rast Eicher 1997). The transfer of textile technology probably occurred through long-distance marriages and slave trade, both of which phenomena require further investigation. Elite gift exchange is also likely to have played an important role in the circulation and spread of the new textile types. It is no coincidence, that some of the earliest and most sophisticated twills have been found at the site of Verucchio, which had extensive trading connections with Central Europe, as indicated by the astounding quantity of Baltic

amber found on the site.

Production

The manufacture of the high quality ‘standard’ weaves required a more organised textile production process. Each stage of this process is “dependent both on the assured supply of raw materials or unfinished goods from the preceding operation, and on the steady demand for its own products from the one which followed” (Bender Jørgensen 1992, 126 and preceding discussion). Technology combined with social relations defines a particular mode of production (Sassaman 1992).

Modes of Production

Several levels of production are widely recognised for ancient crafts (Costin 1991). Household production is the simplest mode in which each household produces what it requires for its own consumption. Household industry produces not only for its own use, but also for sale. In a workshop industry, the product is manufactured for sale and requires increased efficiency and specialisation on the part of a craftsman. Finally, in a large-scale industry, production takes place outside the household on a full-time basis and exclusively for sale and requires capital investment and extensive product distribution. While there is no evidence that textile production in Italy ever reached an industrial scale of organisation before the Roman period, there is strong indication of a manufacture mode, which greatly exceeded in quantity the simple subsistence production. Unlike other crafts, specialised textile manufacture developed through intensification of production rather than through new technology. Furthermore, in contrast to most other crafts, household textile production in pre-Roman Italy was never supplanted or replaced by other, more advanced modes of production. Instead they developed alongside each other.

Specialisation and Specialists

The three more advanced modes of production require a greater degree of specialisation on the part of the craftspeople involved in the production process, specialisation being a concentration on a specific type of production (Dark 1995, 135). Until the advent of urbanism, most communities were so small that full-time specialisation is unlikely.

Most discussions of craft specialisation in ancient societies involve the question of sedentariness (cf. Nijboer 1997), the degree of which is perceived as a major defining factor for each mode of production (Peacock 1982; Arnold 1988). While the dispute about itinerant versus sedentary craft specialisation has been relevant to other types of production, such as metal and ceramic, the specifics of textile manufacture require it to be sedentary due to its particular ‘gendered’ nature.

Iconographic and literary sources and textile tools found in burial contexts provide extensive evidence for the virtually exclusive role women played in textile production in pre-Roman Italy (Gleba 2008). Already at the end of the Bronze Age, the deposition of spindle whorls, distaffs and spools in female funerary assemblages testifies to women’s contribution to the community as textile workers, and indicates that the textile craft became a symbol of the female sphere (see Fig. 1.5; Gleba 2009a). During the Iron Age, finds of spindles and distaffs in precious materials, such as bronze, silver, amber and bone, also support the notion that

these implements were important markers of elite female status. The tools themselves symbolised the prowess of the deceased woman in textile craft and, hence, her social role in the community, while the precious materials of which they were made expressed her status as a wealthy and high-ranking member of that society.

Gender and status, however, are not the only aspects of the deceased demonstrated by the textile implements deposited in her grave. It is also possible to differentiate the degree of skill or specialisation in spinning and/or weaving their dead owner possessed. A spindle whorl simply defined the deceased as female based on her economic role within household, while the presence of spools and other textile tools signified that this particular individual was a more skilled textile worker involved in a more specialised kind of production (Gleba 2009a). The burials containing spools and multiple spindle whorls are few in comparison to those with just one spindle whorl. Assuming that a greater number of such implements deposited with the deceased symbolises that individual's skill in textile craft, we can see that such skill was far from common. The tools in these burials, then, express the specialisation of their owner in textile craft (cf. also Lipkin in this volume).

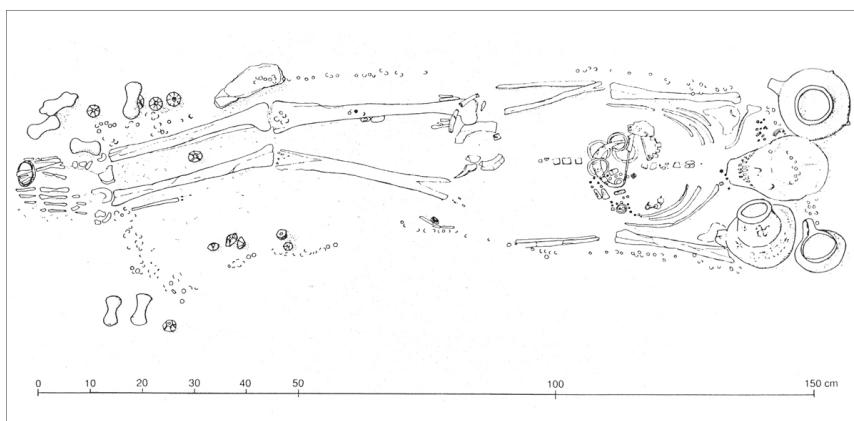


Fig. 1.5. Spools and spindle whorls in Tomb 3 at Osteria dell'Osa, 9th century BC. (After Bietti Sestieri 1992, fig. 3a.391).

By Roman times, although most spinning was still done primarily by women (cf. Larsson Lovén in this volume), Pliny the Elder (*NH* 19.18) states that, “spinning flax is a respectable occupation even for men.” The weaving of linen was also done by both women and men during the Roman period, as confirmed by the epigraphic evidence (cf. Vicari 2001). The appearance of specialised male professional labour, however, does not precede the 3rd century BC, when a more ‘industrialised’ mode of textile production was developing (Larsson Lovén 1998, 76).³

Even in pre-Roman, times, while spinning and weaving were carried out by women, resource acquisition and product exchange are likely to have also involved men, although thus far there is no direct evidence of their involvement in these activities. The exception is the documented practice of the depositing of sheep

shears in male burials in northern Italy (Gleba 2008, 94–95), which has been explained as an expression of the wool-based wealth of the Celtic tribes that settled in the area (Vicari 1994, 241).

Labour Organisation

Regrettably, we know next to nothing about the organisation of textile production in pre-Roman Italy. In the Early Iron Age, it remained confined to the household level, and cloth consumed by a small household was produced by women of that household. Bietti Sestieri postulated a division between spinners and weavers on the basis of their age (Bietti Sestieri 1979, 110, 143; 1992, 102; also see Lipkin in this volume). In contrast, Rallo distinguished between high status *dominae*, who worked wool produced by the household, and lower status women, who worked linen and who, in addition to garments, produced more specialised types of cloth for sails, tents and *libri lintei* (Rallo 1989, 153).

By the second half of the 7th century BC, however, archaeological evidence indicates the development of the workshop mode of production. This change coincides with the specialisation and professionalisation of other crafts, most notably metallurgy and ceramic production (Nijboer 1998). It also coincides with disappearance of precious distaffs and spools from female burial assemblages. It is difficult to ascertain whether this was an expression of a shift in social and economic organisation of the communities or if the first female specialists were replaced by slave labour and/or male weavers. Certainly, with the more complex mode of production, a more strict division of tasks was likely to occur, culminating in the Roman period with the establishment of specific textile professions, such as carder, comber, spinner, weaver, fuller etc., all attested in literary and epigraphic sources (cf. Larsson Lovén 1998 and in this volume).

Exchange

Most textile production remained local and “trade expansion... began only with specialized production of very high-value fabrics” (Horden and Purcell 2000, 359), accumulation of which was regarded as an indicator of status and wealth. As Horden and Purcell (2000, 357) observe further: “It reflects control of labour and of the productive landscape, and access to many different sources of supply; it stores social credit in a long-lasting and relatively low-bulk form; it stock-piles materials which may sometimes be hard to obtain.” The ceremonial textiles of Verucchio, found folded (i.e. displayed) in a way that would emphasise the elaborate tablet borders, embodied their owners’ wealth and were meant to reflect their high status (Staufer 2002, 198, 203; 2012).

Exchange was also generated by the intensification of production due to the demands of the ever-growing urban centres where concentrations of people extended beyond the local resources. While some products were manufactured in the surrounding countryside, others had to be imported over long distances. The finds of soumak textile at Verucchio (Staufer 2003) and of cashmere in the Etruscan settlement of Lattes in France (Moulherat and Vial 2003; Landes 2003, 137–138) are examples of just how far certain textiles could travel.

During the first half of the 1st millennium BC, Italy was becoming an increasingly dynamic place, with constant movement of people and established, long-distance exchange routes, many of which formed a continuum since the

Bronze Age or even longer.⁴ Qualitative changes in textile technology, documented by the appearance of new implement types or new tool shapes, often may reflect influences from other regions of Italy, Central Europe and from Eastern Mediterranean (Greek and Phoenician) areas.

Textiles circulated not only through trade but also constituted an important part of the gift exchange system, and formed an essential part of dowry, and were used for ransom and taken as booty (Gleba in press). Due to the cloth's perishable nature, however, there is little direct evidence remaining of these interactions compared to more durable metal, ceramic and stone artefacts. In the cases when textiles do survive, non-local finds are usually identified on the basis of an exotic raw material, exotic technique, or close comparison with items found elsewhere. Yet, even if their non-local nature can be demonstrated, it is impossible to know how they were exchanged.

Trade

Trade may have involved textiles themselves, as well as raw materials like wool and linen, dyes and mordants, and, to a lesser extent, certain tools, primarily those made of high-value materials, such as metals. Examples of this mode of exchange are known, for the historical period, from written sources: Sibari was famous for its textiles, Taranto for its sheep and purple cloth, and Puglia for its wool (Gleba 2008, 74, 9–81, 166).

Textiles themselves were probably not traded extensively during the Early Iron Age. Garments such as the Verucchio mantles were made for specific ceremonial purposes and would probably only have circulated through gift exchange. It is not until the appearance of workshops in the late 7th century BC that cloth production for commercial purposes began. Textile trade in pre-Roman Italy has been tied to copper, tin, salt, amber, slaves and other commodities.⁵ Trade seems to be indicated by the spread of fashion from Etruscan Central Italy to the northern areas as attested in the Situla Art (Bonfante 1981, 21; also cf. Grömer in this volume).

Trade does seem to be indicated in the case of linen. The extant corpus of archaeological textiles indicates that linen was used extensively in Central Italy, yet it is highly unlikely that it was produced there (Gleba 2004). More likely, linen was brought to Etruria either from the Po region or from Campania, through trade routes established in an earlier period.

As far as the wool is concerned, an important factor that needs to be taken into consideration is transhumance, the seasonal movement of animals from lowlands to nearby uplands and back, which often involves great distances, with the routes taken by the herders and their animals becoming major thoroughfares which remained in use for centuries (Horden and Purcell 2000, 63). Changes due to increasing population and agricultural pressure may have affected these patterns, which, in turn, influenced how and where wool was shorn and prepared, creating a complex system of raw wool exchange that continued into Roman times.⁶

While the above cases were dependent on the Italian peninsular network of exchange, textiles certainly travelled much longer distances on the pan-Mediterranean trade routes. The purple cloth was certainly the most well known item involved in long-distance exchange, traded since the Bronze Age as indicated by the ancient Near Eastern texts. In the early 1st millennium BC, purple cloth was

likely brought to Italy by the Phoenicians and traded as a finished product, together with other typically Phoenician luxury items, such as glass beads, faience trinkets and metal vessels. By the end of the Early Iron Age, the Phoenicians introduced the production technology to the West Mediterranean and established production sites in Italy, which continued to supply the long-distance purple cloth networks (Gleba 2008, 80–81).

Regrettably, at present we have no information as to the agents involved in textile trade during pre-Roman times or how such transactions would have been carried out and what the quantities of traded goods were.

Gift Giving

Another, reciprocal, mode of exchange was gift giving, linked to the traditions of guest-friendship (*xenia*); (see Morris 1986; von Reden 2003; Wagner-Hasel 2009). This mode of exchange was practised among the elite members of communities and involved luxury materials that certainly included clothing and textiles, but also implements that held a symbolic value, such as spindles and distaffs. The presence of single bronze distaffs in the Calabrian Iron Age cemeteries of Torre Galli and Pantano di Cleto – Serra Aiello may indicate such an exchange, as both sites have been shown to have extensive ties with many regions throughout Tyrrhenian Italy, but especially with proto-Etruscan areas (Gleba 2011). Meanwhile, until more research is conducted on the surviving textiles, one is left to wonder if the presence of non-local fibulae in burials might indicate that they came with imported garments.

Information Exchange

Probably the most complex mode of exchange existed on the level of information or textile-related know-how involving ideas, symbols, inventions, fashions, values and, consequently, the technology and tools associated with them. The role of migrant craftspeople in spreading new technologies has been highlighted for ceramics, metalwork and other crafts. In the case of textile production, since women were the principal agents of the craft, this last mode of exchange was probably often carried out through intermarriage. The practice is documented in the presence of burials of indigenous type in alien necropoleis, such as those at Pithekoussai and Pontecagnano.⁷ As women were associated with cloth manufacturing activities, textile equipment may allow us to track their movements, as well as the diffusion of technology. Women took with them the know-how that included ‘recipes for action’ and tools, and transmitted them to the next generation.

Conclusion

There is no evidence for major craft centres in Italy during the Bronze Age and textile production seems to be concentrated in the individual households, indicated by small groups of loom weights and single spindle whorls found throughout the settlements. Towards the end of the 2nd millennium BC, there is a small increase in the numbers of implements, but production appears to be still geared towards making basic subsistence products for the individual household. The Early Iron Age brings more variety in terms of tools that correspond to a wider variety of textiles produced. It is also the period when textile implements first appear in

burials, indicating a shift in the social perception of the craft and, possibly, specialisation among some members of the community. Textile production has moved to a new level, becoming one of the major economic activities and sources of wealth.

It is during the Orientalising and Archaic periods that we see a significant increase in the scale of textile production, indicated by the large number and standardisation of tools. Frequently, textile implements are concentrated in specific areas where other kinds of production, such as ceramic or metal, have been documented, suggesting a household or even workshop mode of manufacture and the existence of, at least, part-time specialist craftspeople.⁸ Specialised production most certainly took place in the sanctuaries, as indicated by the large numbers of textile implements concentrated in specific areas of the sacred precincts (Gleba 2009b; Meyers 2013). In the same period, textile implements start appearing in votive contexts (Gleba 2009b). Some sites begin specialising in the manufacture of a particular kind of cloth, which is even more evident in the post-Archaic period, when relatively large-scale textile production can be postulated for some sites on the basis of archaeological evidence.⁹ The intensification of textile production to increase the output for exchange purposes can be achieved rapidly without economic or technological revolution (Horden and Purcell 2000, 352). In this way, demand stimulated the specialisation of certain settlements in textile manufacturing.¹⁰ Other textile-producing centres are known from written sources; among these are Tarquinia, Sibari and, in particular, Taranto.¹¹

The available evidence provides only scarce glimpses of the people involved in textile production and trade in pre-Roman Italy. There is little doubt, however, that textile manufacture was practised on all levels of society and was one of the most labor-intensive of occupations. As such, it was an industry of great cultural and social importance, which should be factored into any balanced assessment of the ancient economy.

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¹ For places mentioned in text, See Map I.

² The earliest twills, however, have been found in the salt mines of Hallstatt and date to the Bronze Age; cf. Grömer 2012, 32.

³ Compare the situation in Classical Athens, where cloth for sale was manufactured by professional male weavers; see discussion of literary evidence by Thompson 1982.

⁴ The discovery of the Iceman Ötzi has demonstrated the high mobility of the Neolithic populations across the Alps in much earlier times; see e.g. Spindler et al. 1995; Fowler 2000.

⁵ On textiles being exchanged for Tyrolean copper during the Bronze Age, see Peroni 1971, 100. On slave trade in Italy, see Nash Briggs 2003. On trade in salt and amber, see Wells 1980, 43–44. Frey 1988, 13, suggests that textiles came to Central Europe from Italy. Wells 1980, 69, however, states that, “fine woolen garments were being manufactured in Central Europe during the sixth century BC ...and some may have been traded south.” On Hallstatt textile production, cf. Grömer in this volume.

⁶ For discussion of trade in raw wool see Frayn 1984; Jongman 2000, 189.

⁷ For example, see Coldstream 1993 for Pithekoussai. Contra: Shepherd 2004.

⁸ A well-documented case is the workshop at Poggio Civitate, Murlo; see Gleba 2000.

⁹ This is also true of other regions in the Mediterranean; see examples in Horden and Purcell 2000, 352–353.

¹⁰ Thus, at Gravina di Puglia, sheep husbandry was practised in the Early Iron Age but an economy based on wool did not develop there until later periods. See Watson 1992, 97, on wool production in Gravina in the 4th–2nd centuries BC. Large numbers of loom weights excavated in the Hellenistic levels of the settlement indicate a large-scale textile production for trading purposes.

¹¹ At Taranto, while the archaeological material for the site is problematic, we know from ancient authors that sheep husbandry produced the celebrated wool that was worked and transformed on the spot, while on the coast of Mar Piccolo, there existed dyers’ shops that produced purple (Forbes 1956, 136, 162; Morel 1978, 104ff; De Juliis 2000, 81). There is a mention of *estalopia* or a clothing market, which was possibly located in the agora (De Juliis 1984, 331). During the Hellenistic period, Taranto also may have been the centre of gold thread production (De Juliis 1984, 331; Gleba 2006).

2. Textile Making in Central Tyrrhenian Italy – Questions Related to Age, Rank and Status

Sanna Lipkin

Textile craft was one of the most fundamental tasks of women in central Tyrrhenian Italy.¹ This is clearly reflected in the funerary data. Many female burials from the Final Bronze Age to the Archaic period contain textile tools, most commonly a spindle whorl that has originally been attached to a perishable wooden shaft. Even though it is evident that textile work firmly belonged to the female sphere of life, there are some features that enable us to distinguish between women's identities based on rank and age. In this chapter, I will focus on identifying the status and age of textile makers in *Latium vetus* and southern Etruria.

Status and Age – Two Intertwined Concepts

Within the two neighbouring regions of *Latium vetus* and Etruria, a number of Iron Age necropoleis have been investigated. Two of these yield a great deal of osteological data for differentiating the age of the deceased. The one located in *Latium vetus* is Osteria dell'Osa. The burials in this necropolis are roughly contemporaneous with those from the Etruscan necropolis of Quattro Fontanili at Veii (Osteria dell'Osa IIA1-IVB, roughly 950/925–580 BC; Veii IB-IIIC, roughly 900/875–730/725 BC; for chronology, see Pacciarelli 2006, fig. 38).

In Osteria dell'Osa, the ages of 564 individuals from 595 burials have been determined: 118 males, 258 females, 99 undetermined (Bietti Sestieri 1992, 99). Textile tools were found in 212 (36%) burials. While it has been possible to determine the age of 201 of these individuals with textile tools, in the case of 11, it was not possible to ascertain their age (Bietti Sestieri 1992, 53–191). At Veii, Quattro Fontanili, textile tools occur in 132 (23%) tombs. Of these, only 27 individuals from 21 burials have been anthropologically identified, and five of these were identified as female. In total, age determinations have been made for 111 individuals at Veii-Quattro Fontanili (Alciati and Passarello 1963; Passarello 1965; 1967). A single spindle whorl was found in 140 burials in Osteria dell'Osa and in 89 burials in Veii, most of them in contexts of mature adults (Tables 2.1 and 2.2).

In addition to Osteria dell'Osa and Veii-Quattro Fontanili, a single spindle whorl is the most frequently given textile tool also in other necropoleis at Veii, such as Grotta Gramiccia and Casale del Fossa, and other Etruscan (Tarquinia, Vulci, Bisenzio and San Giuliano) and Latial (Caracupa, Rome) necropoleis (Table 2.3). Occasionally, multiple tools, bronze spindles or distaffs have been found in burials

(Berardinetti and Drago 1997; Buranelli et al. 1997, 69; Bartoloni et al. 1997, 98–100.) At Quattro Fontanili, multiple textile tools were found with juvenile, young adult or adult remains, but at Osteria dell'Osa they occur also in child burials (Tables 2.1 and 2.2).

In Tarquinia, where 77% of the burials with female attributes included textile tools, the presence of spindle whorls is not dependent on the rank of the deceased. Even the richest burials may include only one spindle whorl. On the other hand, the bronze distaffs are found only in richly furnished burials (Iaia 1999, 119). A single spindle whorl or a pair of spindle whorls are found in both rich and poor burials also elsewhere and thus cannot be associated with a high social rank. On the other hand, multiple textile tools (sets of spindle whorls and spools), bronze or bone tools (distaff, spindle, clasp) are almost exclusively found in rich burials and thus can be indicators of high rank. For example, at Grotta Gramiccia rich female tombs occasionally include multiple spools, spindle whorl(s) along with an axe and once with a distaff or a spearhead (Berardinetti and Drago 1997, 51–52, fig. 18, 25, 26).

In Imperial Rome, spindle and distaff were important attributes of women, and brides were accompanied by a distaff with the roving on it at their wedding. This practice is described by Pliny the Elder (*NH* VIII.74.194) who recounts that the distaff and spindle of Tanaquil (also known as Gaia Caecilia, wife of Tarquinius Priscus, legendary fifth king of Rome) were kept in the Temple of Sancus even in the time of Varro (116–27 BC).² Spinning was much more time-consuming than weaving and was a continuous and visible activity within society. Furthermore, distaff and spindle are easily portable tools and thus it is understandable that they became symbols of textile-making instead of, for instance, large and stationary looms (Gleba 2008).

It may be considered that spinning and weaving were tasks performed by almost every woman in society. The distaffs found in some burials are, however, too heavy and unsuitable for practical use. Therefore, they are more likely to have been symbols of high rank, as suggested by Gleba (2004, 2; 2008, 174). Those who were buried with precious spindles or distaffs were not necessarily skilled or even involved with spinning and weaving very often. Some female burials (sexed either osteologically or through grave goods) contain no textile tools, which already suggests that not all female members of society participated in textile making. Based on funerary data, it is, however, possible that textile making and especially the knowledge of special techniques elevated one's social status. In the Roman world, the skill of wool working (*lanificium*) was the foremost virtue in a woman, and brides were advised to be diligent with their textile making (Festus 96; cf. Larsson Lovén in this volume). This attitude towards textile crafts evidently had long cultural roots. The substantial richness of adult female burials reflects their distinguished rank and role as *mater familias* rather than their actual work with textiles (Lipkin 2012, 91). Those who were not that skilled might have wanted to become so, or their relatives wanted to see or depict them as such, and this was accomplished by providing them with valuable textile tools made of bronze or amber. Thus, such tools in burials should be seen primarily as reflections of social rank.

Table 2.1. The distribution of the textile tools according to different age groups at Osteria dell'Osa.

(Period II, 900–770/950–850 BC, Based on Bietti Sestieri 1992). Infant: 1 to 6 years, child: 6 + to 11 years, juvenile: 11 + /12 to 19+ years, young adult: 20 to 30 years, adult: 30 to 40 years, mature adult: 40+ to 60 years, old adult: 60+ years.

Single spindle whorl

91.63% child
35.91% juv.
38.31% adult
16.04% old
16.04% old adult

Table 2.2. The distribution of the textile tools according to different age groups at Veii-Quattro Fontanili. (Based on De Agostino et al. 1963; Close-Brooks et al. 1965; Ward-Perkins et al. 1967; Bachtvarova et al. 1970; Berni Brizio et al. 1972; Bedello and Fabbriotti 1975; Righetti 1976).

Age group	1 spindle whorl	2 spindle whorls	Spindle whorl(s) and spool(s)	Distaff and other tools	Spool	Distaff	Total
Infant (c. 3 years)						1	1
Infant/child	1						1
Child	1						1
Juvenile			1				1
Young adult	2		1	2			5
Adult	2		1		1		4
Mature	6						6
Inf. and juv.	1						1
Inf. and ad.	1			1			2
Inf. and mat.		1					1
Inf. and young ad.				1			1
Inf. and young ad. and ad.			2				2
Inf. and ad. and mat.	1						1
Total	15	1	5	4	1	1	27

Furthermore, a high rank was something that people were born with. Occasionally, bronze textile tools are also found in children’s or juvenile burials (Table 2.2; Lipkin 2012, table 4.4). The identification of the sex of the infants, children and most juveniles is extremely difficult, since the morphological features of the bones are similar in both sexes. Therefore, any identification of the sex of children is usually based on the grave goods. Indeed, at Tarquinia, most of the distaffs are found in burials of pre-adults. In addition, a burial containing a belt, possible tablets, 63 spools and a spindle whorl is also a child burial. This suggests that the rank was not dependent on age (Iaia 1999, 55–62, table 6.)

Burying children with precious textile tools was practised in Latium already

during the Final Bronze Age. A set of miniature textile tools was recovered at Guidonia, Le Caprine. These include a distaff, a bronze spindle shaft with a whorl attached to it, another spindle whorl, four spools and a knife. The burial belonged to a toddler of not more than two years of age (Guidi and Zarattini 1993, 191–193). Using precious materials for miniature tools is yet another indication of high social rank (Pacciarelli 2006, 212; Gleba 2008, 175).

Textile Making and Childhood

The reconstruction of how the Latins or the Etruscans viewed childhood is not straightforward. In Roman culture, infants of less than one year of age were not accorded any formal mourning, and full mourning was appropriate only for individuals of more than ten years of age (Rawson 2003, 104). Infant and child mortality was high in antiquity. According to Becker (2004, 264), 50% or less survived childhood. Lucy (2005, 50) suggests that this would have influenced “the emotional involvement of parents with their children.” While fetuses and infants are often found buried under eaves of houses in Latium, other young children are usually buried in the necropoleis (Modica 2007). In Etruria, it is not known where the children of under 3 to 4 years were buried (Becker 2007). This may indicate that “certain age groupings were viewed as possessing different degrees of humanness” (Lucy 2005, 63). A high percentage of child mortality may be the reason for this attitude. As a child was born, the parents must have been prepared for his or her death before reaching adulthood. As the mortality rate was high, the consciousness of death was ever present. This possibly affected the parents’ feelings towards their children, especially children under 2–3 years. This age, in fact, is when children are capable of surviving on their own for a short period of time, as they can walk, talk and eat on their own. They also start to learn new skills around this time. Perhaps from this age onwards, children were taught skills that were useful for the survival of the family, such as preparing food or assisting in spinning and weaving. Children in ancient times were regarded as individuals who are not adults but are preparing to become active members of society (Muggia 2004, 23). This attitude does not see children as “finished humans” and full members of the community (Dasen 2011, 293–294).

Table 2.3. Textile tools in Latin and Etruscan necropoleis. (Based on Angle and Gianni 1985; Gjerstad 1956; Iaia 1999; Pohl 1972; Berggren and Berggren 1972; Bietti Sestieri 1992; De Agostino et al. 1963; Close-Brooks et al. 1965; Ward-Perkins et al. 1967; Batchvarova et al. 1970; Berni Brizio et al. 1972; Bedello and Fabbriotti 1975; Righetti 1976).

Location	Single spindle whorl	2 or more spindle whorls	Spindle whorl(s) and spool(s)	spools	Bronze spindle/ distaff	Burials with tools (total burials)
Caracupa	20	6	1	1	1	29 (73)
Rome (Via Sacra, Esquiline, Quirinal)	23					23 (105)
Osteria dell'Osa	140	37	19	2	14	212 (595)
Tarquinia (Selciatello Sopra, Selciatello, Le Rose, Arcatelle, Impiccato)	57	14	3	2	14	90 (286)
San Giuliano	11	1				12 (40)
Vulci	13	1			2	16 (48)
Bisenzio	19	2				21 (68)
Cerveteri, Sorbo	76	9				85 (278)
San Giovenale	2	5				7 (23)
Veii, Quattro Fontanili	89	5	10	23	5	132 (490)

In Osteria dell'Osa, infants, children and juveniles were given textile tools quite frequently. The percentages are respectively 14% (6 out of 44 burials), 18% (6 out of 34) and 61% (35 out of 57); (Table 2.1). Infants and children were buried with 1, 2 or 3–8 spindle whorls. Juveniles, on the other hand, were laid to rest with a greater variety of tool types. In addition to burials with a single spindle whorl, there are burials with multiple spindle whorls as well as sets of spindle whorl(s) and spool(s), and two burials even had a bronze distaff associated with other textile tools (Bietti Sestieri 1992, 747, Tomb 44; 821–823, Tomb 178).

Table 2.4. Age group percentages at Osteria dell'Osa. (Bietti Sestieri. 1992).

Age group

Infant

Child

Juvenile

Young adult

Adult

Older adult

Old

Total

Table 2.5. Age groups percentages at Veii-Quattro Fontanili. (Alciati and Passarello 1963; Passarello 1965; Passarello 1967; Pacciarelli 2006,265).

Age group

Infant

Infant or child

26ild
 00venile
 90young adult
 20Adult
 10Infanture
 10Total

In the necropolis of Osteria dell'Osa there are fewer children buried than at Veii. If we add up infants and children all together, the resulting percentage is 14% at Osteria dell'Osa, as compared to 47.5% at Quattro Fontanili (Tables 2.4 and 2.5). In general, in Etruria infant and child burials contain fewer grave goods compared to the adult burials but some exceptions exist (Bartoloni et al. 1994, 23). This seems to be the case also at Osteria dell'Osa. Infant burials (1–6 years) are quite common in Veii, constituting 24% of all burials. For comparison, at Osteria dell'Osa infant burials are rather rare, constituting only 8% of all burials. Only a few infants of under two years were found at Veii, which may indicate that foetuses and babies were buried at the settlement sites (Teegen 1995) or in separate necropoleis.³ However, the phenomenon of burying children under the eaves of the houses is known only from Latium (and the nearby Faliscan region). In the settlement sites, primarily infants of under 1 year or those 2–3 years old, but also some children of up to the age of 9–14 years were found (Modica 2007, 187–198). Only in one case does a burial inside the settlement site in Latium include a textile tool. Tomb 2 in Ficana zone 3b-c contained a child of no more than 24 months old accompanied by a spindle whorl (Modica 2007, 121–122, 195; Brandt 1996, 129–133; Becker 1996, 456).⁴

Tools made of precious materials and multiple tool sets included with infants and children are indications of rank rather than their textile work output in the community. This interpretation does not exclude the possibility that children of early age learnt textile techniques and took part in production to some extent. However, there seems to be no difference in rank between the infants and children buried in settlement sites and necropoleis, based on burial goods. The different ways of interment were practised in parallel in Latium and Etruria, but based on the available data, it is difficult to determine the reason for this. It is possible that children buried in settlement sites had a different kind of status as human beings in contrast to those buried in the necropoleis. Foetuses and infants did not benefit the community through their work and older children buried on settlement sites may have been sick or handicapped, or afforded a special status. Evidence for this exists in Tarquinia and Rome (*Equus Domitiani*). A famous case is that of a child with symptoms of epilepsy buried in a natural cavity in what appears to be a sacred area at Tarquinia in the 9th century BC (Bonghi Jovino 1991, 681). Five other child burials were excavated in the area as well. In Rome (*Equus Domitiani*), a child of 12–14 years old with symptoms of Down's syndrome had faced a violent death (Modica 2007, 225). Children are known to have been buried in natural cavities in settlement sites in Latium as well (Modica 2007, 225).

The Skill of Textile Making Acquired through Life and Practice

While there are significant differences in the numbers of infant and child burials,

the percentages of juveniles, adults and mature adults are approximately the same at Osteria dell'Osa and Veii-Quattro Fontanili. At Osteria dell'Osa (Period II; Table 2.1), more than half the juveniles have a set of spindle whorls and spools in their burials. This indicates that nearly all girls were taught various textile-making processes, such as spinning, tablet-weavings and loom weaving when, or even before, they reached the juvenile age. Learning these techniques was an important part of their life as female members of the community. It is likely that spindle whorls and spools were placed in juvenile burials because textile-making was something they had learnt and were involved in.

Multiple tool sets appear less frequently among the adults, which may be explained by their specialisation in particular tasks. Some of the adult textile makers became highly skilled and learnt complex and difficult techniques. At Osteria dell'Osa and Veii-Quattro Fontanili, such specialists were given their tools as burial gifts after death. These skilled textile makers probably became specialists who might have gained a higher social status through their skills. For example, while tablet-weaving as a technique is relatively easy, it requires experience and skill to design, remember and weave complicated patterns. Those who did not become specialists, most likely continued producing simple (perhaps everyday) textiles. Furthermore, since spinning was a particularly time-consuming task, the tools associated with it (spindle, distaff) followed the deceased into the burial. A single spindle whorl seems to be only an indicator of the female sphere of duties and the multiple tool sets are evidence of specialisation or "professionalism" (Gleba 2008).

The components of the multiple tool sets suggest that their owners were skilled. The sets include spindle whorls of varying sizes and shapes, suggesting production of different types of thread used for various kinds of textiles. Many of the whorls and spools were also worn and thus were used in daily life before their deposition in burials (Bietti Sestieri 1992, *passim*; Gleba 2008, 175–177).

Consequently, the percentage of multiple textile tool sets in adult burials could indicate the percentage of specialised workers buried at the necropolis. None of the individuals at Veii were identified as old, in contrast to Osteria dell'Osa where 15% of all individuals were old adults.⁶ In Early Iron Age Osteria dell'Osa (Latial II, 900–770/950–850 BC), 41% of old adults have been given textile tools. Most of these old adults were given one spindle whorl, but occasionally sets of spindle whorl(s) and spool(s), a bronze spindle with other tools or just spools also occur (Table 2.1). The percentages seem to be quite similar in the case of young adults, adults and mature adults, but the tendency seems to be that the older the individuals become, the more single spindle whorls there are in burials in comparison with the sets of multiple textile tool sets (Bietti Sestieri 1992, 110–116). If we accept that multiple tool sets are a sign of expert knowledge in textile craft, their gradual decrease in amount in burials of older women could indicate that not all women possessed enough skills, diligence or opportunity to practice as specialised textile professionals.

Conclusion

The grave goods, in general, reflect the importance of textile making per se and a desire on the part of the living to show that the deceased had been involved in this essential task. Textile making was a virtue of women in the Roman culture, and

the funerary data from the Iron Age contexts in *Latium vetus* and Etruria suggest that the same was true in the preceding periods. A spindle was the attribute of women and their role as *mater familias*. The presence of a spindle whorl or spinning implements made of precious materials does not, however, directly reflect the skill of the deceased. The bronze spindles and distaffs are, after all, mostly useless in real work. They need to be regarded as symbols of high rank, and they are occasionally also found in rich child burials. Therefore, it is quite evident that high rank is not depended solely on age. It was something that children were born into. In *Latium vetus* and Etruria, infants and children were buried according to different customs that could vary also within the same community. Infants and children were buried in the necropoleis of adults, settlements or necropoleis dedicated to children. High child mortality (50% and above) affected the perception of childhood as something that prepared children to adulthood and full humanness. The funerary data suggest that a certain stage was achieved when a child reached the age of 2 to 3 years. At this age, children become more active and learn new skills. It is possible that from this early age onwards, children started to learn certain tasks such as spinning and weaving that would become important in their future life. Multiple tool sets include spindle whorls and spools, which suggests that their user must have been a skilled spinner and was familiar with the tablet-weaving technique. As these sets are mostly found in juvenile burials at Osteria dell'Osa, it indicates that juveniles were diligently practising spinning and weaving. Female children and juveniles needed to prepare for their future role as a *mater familias*, whose task was to provide the clothing for the family. Multiple tool sets found in adult female burials suggest that these women truly handled textile techniques that required specialised skills. Their skills could have elevated their social status and their work could be considered as professional. Not all women had enough patience or ability to become highly skilled, but as textile making was time-consuming and continuous work, it is likely that nearly all women took part in textile making activities, at least at a basic level, as evidenced by the funerary practice.

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1 For places mentioned in text, See Map I.

2 Pliny the Elder (NH VIII.74.194) also mentions that the cloth made by Tanaquil and worn by Servius Tullius was preserved in the shrine of Fortune. Tanaquil is furthermore credited with having woven the first straight tunic (*tunica recta*) of the kind that novices and newly married women wore.

3 During the excavations in 2006–2010 at the Latin centre of Crustumium, a burial ground with evidence of solely child burials was recovered. The excavations were conducted by the Soprintendenza Speciale per i Beni Archeologici di Roma in collaboration with the University of Oulu, Finland.

4 A spool was found in the fill of this tomb, but its connection to the burial is unclear. Possibly, it was part of the fill of the earlier fossae.

5 The tablet-weaving technique was used to make starting and finishing borders when weaving on a warp-weighted loom. This loom type was used in central Tyrrhenian Italy during the Iron Age. It is likely that spools were used as small weights during tablet weaving while weaving selvages or separate bands; Gleba 2009, 140–141; Ræder Knudsen 2002, 228–229.

6 The data from Veii-Quattro Fontanili is generally more limited since many burials still await osteological analysis. The absence of old adults at Veii may be due to difficulties in ageing old individuals. It is regrettable that only the material from Osteria dell'Osa produced a sufficient number of examples for statistical analysis of the connection between biological age and the presence of textile tools.

3. Discovering the People behind the Textiles: Iron Age Textile Producers and their Products in Austria

Karina Grömer

Introduction

Textile production constituted an essential part of prehistoric life and was locked into the system of society at every level – social, economic and even religious. In order to build up a picture of the world of textiles in the prehistoric period, all small items of evidence from archaeological excavations have to be put together as in a puzzle. It is a delightful challenge to create a hypothesis about ‘the people behind the textiles’, i.e. textile producers. In this chapter, we deal with the Iron Age in Austria (Urban 2000, 225–370), which is divided into the Early Iron Age or Hallstatt period (800–450 BC) and the Late Iron Age or La Tène period (450–15 BC), associated with the Celtic Culture. Prehistory in the territory of modern Austria ends with the occupation by the Romans in 15 BC.

Evidence

In order to obtain an overview of Iron Age textile craft in Austria, we first have to deal with the different sources of evidence available.¹ Highly important sources are the textiles themselves, but also the various textile tools. From settlements we have information about workshops and workplaces. The craft workers, the producers of the textiles, appear in the graves and even on items of contemporary art. Regrettably, we do not have any relevant written sources for Iron Age Austria. Thus, we do not know the names of the people, their products or their professions. All the different sources offer various kinds of information, but also hold methodological problems which need to be addressed.

Textiles and Raw Materials

Cloth survives poorly in most of Europe because of the destructive effects of alternating wet and dry weather. In Iron Age Austria, however, we have the fortuitous circumstances of the textiles being preserved in excellent condition in the salt mines of Hallstatt and Dürrnberg (Fig. 3.1). Additionally, there are mineralised textiles in graves, which survived as corrosion products on metal jewellery or grave goods. The technological details of the textiles are crucial for understanding their production. All in all, about 1000 Iron Age textiles survive in Austria, most of which originate from the salt mines of Hallstatt and Dürrnberg (Grömer 2012).

For any interpretation of the material, it has to be kept in mind that we merely know of a tiny part of the textiles that existed in prehistory. Those fragments survived under specific conditions and belong to different archaeological contexts such as salt mines or graves. Additionally, the textiles served different purposes, which means that the extant items are far from being representative of the Iron Age textiles.

The raw material of woven textiles can be analysed from the existing cloth itself, but it can also be deduced indirectly from archaeobotanical and archaeozoological evidence in settlements (e.g. Belanová-Štolcová and Grömer 2010). Yet here, too, one must be cautious, because the evidence of, e.g. sheep or flax in a settlement is not complete proof that wool or linen textiles were produced there. Sheep were also kept for milk and dairy products as well as for meat. Different types of production can be ascertained on the basis of osteological evidence, in particular the slaughter patterns. The presence of older ewes and weathers is generally considered to indicate the production of wool. Flax can be utilised for the production of oil as well as for textile fibre. The archaeological evidence to determine the different uses is difficult to obtain.

Textile Tools

Various textile tools were made of clay, bone, stone or metal and so they are well known from different Iron Age sites, both settlements and graves (Belanová-Štolcová and Grömer 2010). These include spindle whorls, loom weights, distaffs, needles, shears, spools etc. However, certain tools were made of perishable organic materials such as wooden weaving swords, weft beaters, loom frames, heddle rods, tablets, spindles and distaffs. This signifies that, even when textile tools appear to be common artefacts in the Iron Age, we only find the durable tools of selected activities such as spinning and weaving. There are, furthermore, many stages in the work-flow of textile production, which are done manually or with tools that we do not recover at all, or do so rarely, e.g. plucking wool, carding or dyeing (Grömer 2010, fig. 12). Modern excavations and analysis of settlements provide a great deal of information about where ancient people lived and worked. Together with the tools, we have archaeological evidence of workshops and places of work within the organisation of the settlements.



Fig. 3.1. Hallstatt, Upper Austria: organically preserved textile from the salt mine, left, and mineralised textile adhering to a bronze artefact from the graveyard, right. (© Natural History Museum Vienna, Prehistoric Department).

Burials

Burials and cemeteries are an important source of information about topics such as the chronological and regional distribution of artefacts, questions about gendered funerary gift assemblages or the social status of a person within a particular society. In special cases, we even find textiles in the graves, where they served different purposes such as parts of a garment, shrouds or even wrappings of grave goods. An excellent example for this is offered by the analysis of the princely tomb of Hochdorf by Johanna Banck-Burgess (1999).

When we concentrate on the Iron Age grave goods from Austria, the archaeological record holds evidence of spindle whorls, loom weights, needles and, sometimes, shears (from the La Tène period onwards) and knives in the burials. During the Hallstatt period, spindle whorls were typical artefacts in women's graves (e.g. Statzendorf: Rebay 2006). Yet, what does this signify (cf. e.g. Primas 2007, Eibner 1986, Gleba 2008, 171–174)? Does the presence of a spindle whorl in a grave indicate that this individual was involved in the craft of spinning, while others were not? In a prehistoric society, a whorl can be a symbol of a specific status – purely a symbol for womanhood in general (cf. Gleba in this volume) – or of a specific high or low status (depending on the number of spindle whorls). Perhaps the spindles deposited in graves do not reflect the daily reality, but have a ritual or religious significance, as can be suggested in the case of the depictions of textile workers.

Iconography

Iron Age art offers a more or less detailed impression of people, their garments, weapons and tools. Various activities, scenes and sometimes picture stories are depicted especially on Hallstatt period pottery (Dobiat 1982) and in Situla Art (Figs 3.2 and 3.7) (Turk 2005). The latter is an artistic style of the Late Hallstatt and Early La Tène periods (between 700–400/300 BC), which is known primarily in Alpine Austria, Slovenia and northern Italy. Examples of Situla Art are common to the (South-) Eastern Hallstatt Culture, as well as to the Palaeovenetic Culture of Este and the Villanovan Culture of Bologna. Objects of bronze sheet – vessels called *situlae*, lids, girdles, scabbards – were decorated with figural scenes illustrating the life of the Iron Age nobility. It is highly remarkable that the Situla Art and Early Iron Age pottery display scenes of feasting, horse riding, hunting, music-making, drinking – and textile work! There are no illustrations of a bronze smith, a wood worker or a potter whose products were as equally important in daily life as textiles.



Fig. 3.2. Situla of Kuffarn, Lower Austria, Early La Tène period. (© Natural History Museum Vienna, Prehistoric Department).

Textile production is shown on the “urn” from Sopron (see Fig. 3.3), as well as the pendant of Bologna and the throne from Verucchio, Tomba del Trono (Morigi Govi 1971; Eibner 1986, cf. Gleba 2008, 28–30). There are more or less detailed depictions of various stages of production: spinning, warping, weaving. And, what is important in this case: only women are depicted being involved in the textile work.

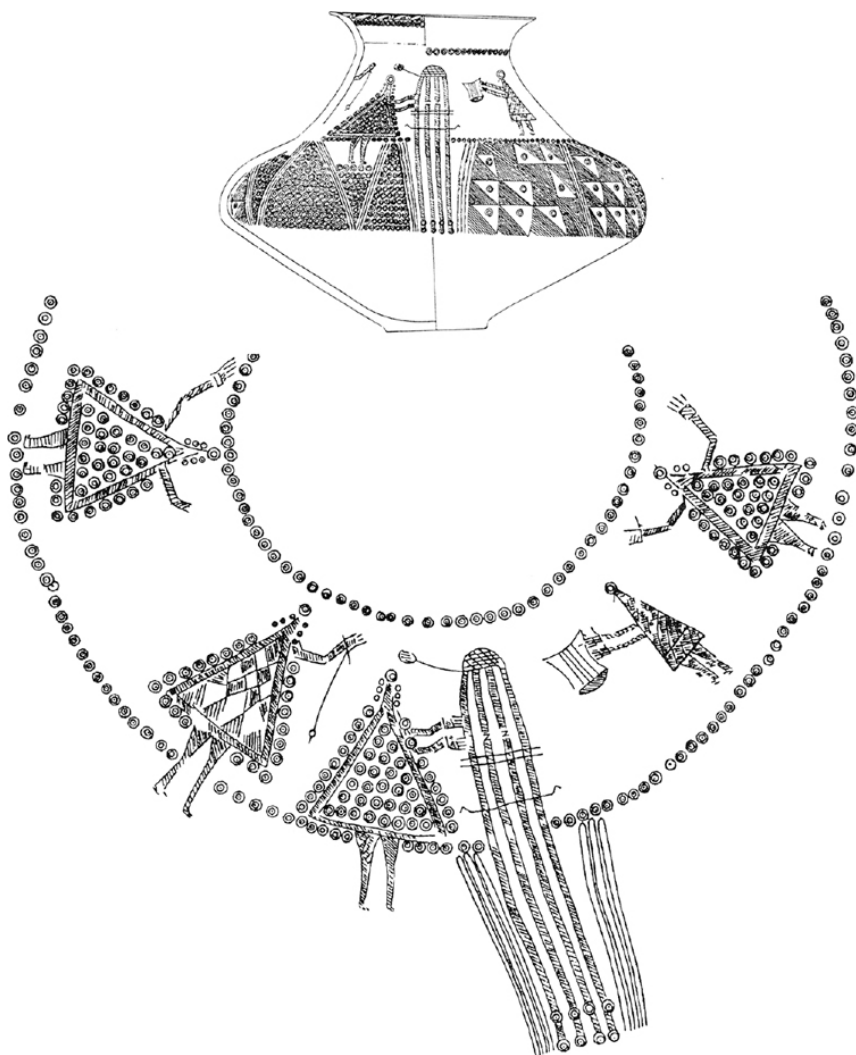


Fig. 3.3. Sopron, Western Hungary, tumulus 27: scene with women spinning and weaving, Hallstatt period. (After Eibner 1986, Taf. 1).

Textile Production – Work Flow and Weaving Techniques in the Iron Age

The basic facts of textile production in the Iron Age can be deduced from the tools and the textiles. Textile production encompassed many different stages from preparing the raw material and spinning to weaving, finishing and sewing (Fig. 3.4; Grömer 2010, 43–220). For all these activities, various resources, tools and spaces are needed, such as cultivation areas, places for looms or just a space somewhere to do a specific job of work. For some of these production stages, specialised know-how is required (Belanová-Štolcová and Grömer 2010).

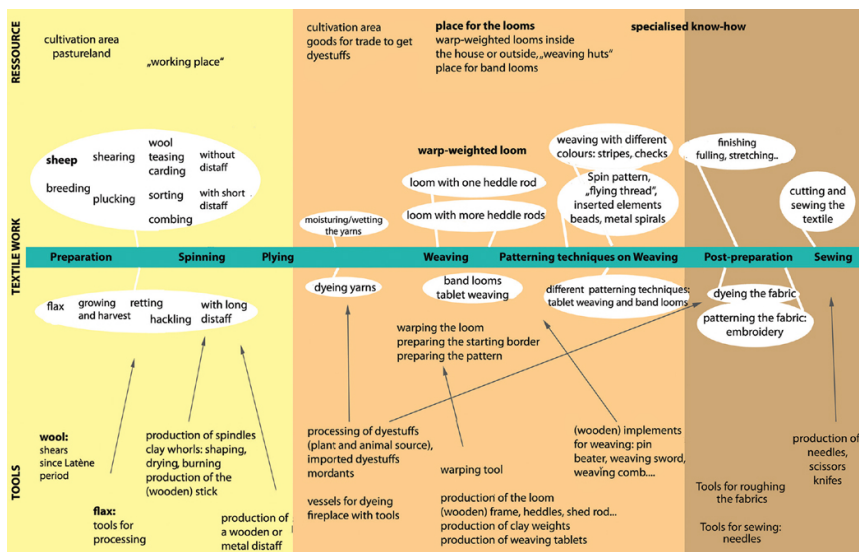


Fig. 3.4. Work-flow of textile production. (© Karina Grömer).

For the Iron Age, we have many indications that the warp-weighted loom was perhaps the most common implement for creating a large piece of cloth. This type of loom can be traced by the presence of starting borders on the textiles from the Hallstatt salt mines (Grömer 2005), and from loom weights found in settlements and even in graves. These loom weights (which kept the warp threads taut on the loom) were made of less perishable clay, although most of the loom was composed of wood. It is noteworthy that, during the La Tène period in Austria, the number of loom weights decreases and therefore perhaps another loom type may have come into use (cf. Stöllner 2005). Since a two-beam loom or a ground loom is made entirely of wooden parts – which are seldom preserved and hard to recognise – it is difficult to learn much about its use. A Hallstatt period vessel from Rabensburg in Lower Austria possibly represents a ground loom (Franz 1927, fig. 1).

The warp-weighted loom enables the creation of a wide range of different weave structures and patterns (Fig. 3.5). Examples from the Early Iron Age areas of the Hallstatt salt mines (850–300 BC) include tabby, reps, basket and half-basket weave as well as different types of twill, namely zig-zag, herringbone and lozenge (Grömer 2010, figs 63 and 67). Twill and its variants are the most common weave types in the Early Iron Age. The spin pattern was very popular in the Hallstatt salt mine textiles as well as in the textiles from graves of the same period in the Eastern Hallstatt Culture (Bender Jørgensen 2005, 140–145). The colour patterning was done as stripes or checks during the weaving, using yarn in different natural shades or dyed in bright colours (Fig. 3.5). Many different dyes were used in the textiles from the Hallstatt salt mine (Hofmann-de Keijzer et al. 2005), including plant dyes like woad, weld or madder. There is also evidence of diverse dyeing techniques, including dyeing the fleece, the yarns and the woven cloth.

Besides the weaves made on a warp-weighted loom, there are various textiles

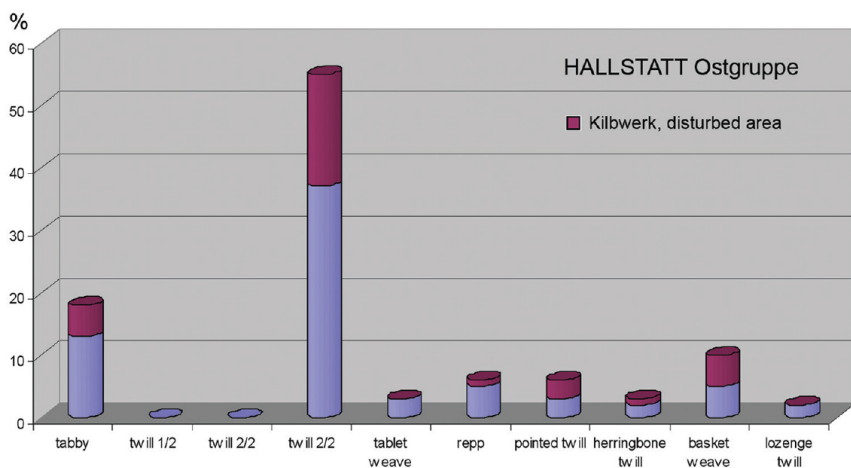
made using band looms (Grömer 2005, plate 7). Among these are rep bands of 1–3 cm in width, which were perhaps made with heddle rods or a rigid heddle. Usually these ribbons are beautifully patterned by using different colours in the warp threads to create stripes and checks. Other band weaves are tablet-woven ribbons of 1–2 cm in width (Grömer 2001). Their patterns are made in a highly sophisticated manner, showing designs known from contemporary pottery. In addition to the narrow bands, we find in the Hallstatt salt mines broader bands of 5–15 cm in width, woven in tabby, rep, basket weave or even twill. They are usually monochrome, with the exception of a find of a black band with dark red checks woven with brocade warp threads (Hundt 1959, abb. 12–13, taf. 10; Grömer 2005, fig. 11, pl. 7/6).







Fig. 3.5. Hallstatt, Upper Austria: textiles from the Iron Age areas of the salt mine, varied scales.
(© Natural History Museum Vienna, Prehistoric Department).



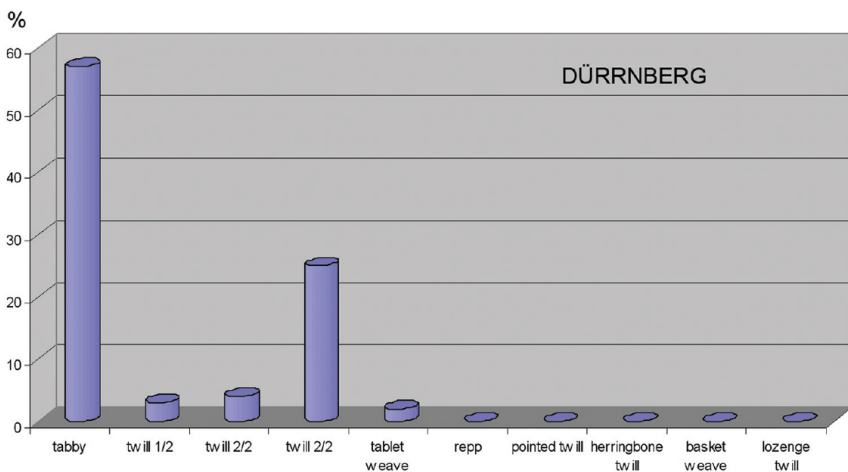


Fig. 3.6. Comparison between the weave types from Hallstatt (Eastern Group, primarily Hallstatt period), top, and Dürrnberg (primarily La Tène period), bottom. (© Karina Grömer, after Grömer 2005 and Stöllner 2005).



Fig. 3.7. Situla from Certosa, Northern Italy, scan of the frieze, Late Hallstatt period. (© 7reasons).

A great deal is known about different seams and hems from Hallstatt (Mautendorfer 2005), and – more importantly – items that show intentional tailoring have been recovered. This signifies that the cloth was cut to shape and sewn together, like the example from the Ender Werk in Hallstatt (Hundt 1960, taf. 20–21). These hints of tailoring are intriguing, as usually in the Mediterranean (classical Graeco-Roman) tradition, most garments were woven to shape (Pekridou-Gorecki 1989, fig. 46–67). At Hallstatt, we thus know of a different tradition of how to construct an item of clothing.

Textile production in the Hallstatt period thus demonstrates a flourishing creativity with a wide range of patterns, structures, thread counts and yarn diameters (Grömer 2005, figs 14–15; 2012). Some textiles seem to be the products of specialists: complicated patterns in tablet weaving, very fine spun yarns, and patterns with floating threads require considerable time and specialised knowledge (see Grömer 2010, 223–239).

In the La Tène period, some changes can be recognised. In Austria, some hundred textiles from Late Iron Age Dürrnberg (Fig. 3.6) and a few textiles from graves of the same period are known. The main weave type encountered here is tabby, while basket weave and twill occur only seldom (Stöllner 2005, fig. 6). The textile corpus has a much more reduced repertoire, and the majority of textiles are

more simple, although still of high quality. Rather, the textiles look standardised, even in thread count and yarn diameter. This suggests that, during the La Tène period, the organisation of textile production shifted to become more efficient and produce a maximum output (von Kurzynski 1996, 36). Such a conclusion is further confirmed by the more standardised spindle whorls in the La Tène period and the reuse of pottery sherds to make whorls, indicating that it was their function that was of importance, and not their design. Late La Tène grave textiles (containing shrouds, garments and wrappings) continue this development with tabby as the main type (Grömer 2012).

The People behind the Textiles

As mentioned above, there are few pictorial sources depicting people involved in the activity of producing textiles in the Central European Iron Age. On the Sopron Urn, dated to the Early Iron Age, various human figures are incised (Fig. 3.8). As is typical for the iconography on Hallstatt period pottery, women are usually depicted wearing big triangular dresses, while men have trousers or smaller triangles (Dobiat 1982). On the Sopron Urn we see one woman spinning and another weaving on a large warp-weighted loom, with the loom weights hanging low in a pit (see Fig. 3.3; Eibner 1986). They are accompanied by two other women with their hands above their heads as though they were dancing. A fifth, shorter figure (male?) is holding a stringed instrument which could be a lyre.

The bronze pendant (*tintinnabulum*) from Bologna (Morigi Govi 1971; Eibner 1986; cf. Gleba 2008, 28–30), dated about 630 BC, shows on both sides detailed scenes with women involved in textile work – here more parts of the whole process are depicted: on one side of the pendant there are two females preparing the fleece by dressing the distaff for spinning. On the upper section, stands a woman, holding a distaff and spindle. On the reverse side of the pendant we see several activities concerning weaving. On the bottom scene, two women are working together to make the warp – the foundation of the cloth. The scene above shows a woman sitting on a throne weaving on a probably two-storied warp-weighted loom, while another woman is handing her a vessel (with wool in it?). All the depicted persons involved in the textile work are female.

Another indication of the gender of the textile producers may be found in graves. In this connection, a useful case study is Statzendorf (Rebay 2006), a typical cemetery of the Hallstatt period Kalenderberg Culture in a rural periphery. The graveyard contains 373 burials, most of which (90%) are cremation graves, dated to HaC and HaD1 (800–600 BC). The dead were usually equipped with a number of vessels, some of which constituted parts of a drinking and dining set. Animal bones represent the remains of meat, frequently found together with knives. Personal objects recovered are fibulae, pins, bracelets, belt plates and beads of glass and bronze. Tools and equipment such as spindle whorls, needles, knives and whetstones were found, as well as weapons such as axes and lances. About 12% of the graves at Statzendorf contain textile tools (see Fig. 3.9). The skeletal remains in these graves that could be analysed by anthropologists proved to be female. Katharina Rebay calculated a social index (seen as the social status within a given society, as shown in the value of grave goods) by quantifying the value of both grave goods and types as well as burial type, materials used for the grave goods and metal weight (Rebay 2006). Based on this, it is clear that spindle

whorls and needles were found in both poor and very rich graves (index 100) (see Fig. 3.10). Thus, it can be suggested that the question of differences in social or economic status in terms of textile-related activity does not appear to be pertinent here.

The cremation graves at Uttendorf im Pinzgau, which are dated to the 8th century BC (HaC) is another example from the Hallstatt period (Moosleitner 1992). There are ten rich female graves with spindle whorls and a set of loom weights as grave goods (see Fig. 3.11). Some of the loom weights were even made of stone and elaborately decorated. The surface of these textile tools usually has traces of secondary burning, which suggests that they were cremated together with the deceased and then deposited in the grave next to the urn (Fritz Moosleitner, pers. comm. August 2007). In the Hallstatt period cemetery at Frög, Carinthia, spindle whorls, loom weights, spools and – something rare for Iron Age Austria – distaffs were found (Tomedi 2002, 159–162). Thus, in the Early Iron Age, textile tools are common grave goods, especially in female graves, and both in inhumations and cremations. In the Late La Tène period, textile tools occur less frequently in cemeteries than in the Hallstatt period. La Tène period graves with textile tools such as needles, spindle whorls and loom weights are known from Pottenbrunn in Lower Austria (Ramsl 2002) or Kundl in Tyrol (Lang 1998, 144f). On rare occasions, spindle whorls have been found in graves which have been anthropologically determined to be male. For example, in Pottenbrunn Grave 565, a 55-to-60 year-old man was buried with a spindle whorl and bronze and silver finger rings (Ramsl 2002).



Fig. 3.8. Sopron-Warischberg, Western Hungary, tumulus 3: ceramic vessel with incised depiction of a woman, Hallstatt period. (© Natural History Museum Vienna, Prehistoric Department).

In inhumation graves, spindle whorls were usually found near the hands, e.g. in

Statzendorf Graves A014 and A089 (Rebay 2006) or in the cemetery at Hallstatt-Salzbergthal (Kromer 1959, Kern et al. 2009, 114ff). From the recent excavations, a girl's grave (Hallstatt, No. 33, new excavations by Anton Kern) was found with a whorl next to her left hand and a knife next to her right hand. Sometimes, needles or whorls were placed on the upper body or next to the feet (A. Kern, pers. comm.).

Statzendorf grave Nr.	type	social index	spindle whorl	needle	knife
A002	cremation	14	2		1
A003	cremation	11	1		1
A009	cremation	44	3		1
A013	cremation	78	1	1	2
A014	inhumation	100	6	needle box	2
A018	cremation	30		1	1
A019	cremation	39	1		1
A022	cremation	19	1		1
A032	cremation	27	1		
A037	cremation	60	1		2
A039	cremation	33	1		
A047	cremation	52	1		1
A055	cremation	34	1		1
A061	inhumation	71	1	1	
A068	cremation	39	2		1
A076	cremation	61	2		
A079	inhumation	33	1		
A089	inhumation	22	4		
A092	cremation	22	1		
A104	cremation	63	2		
A108	cremation	32	2		3
B032	cremation	28		1	
B037	cremation	25		1	
B102	cremation	19	1		
B134	cremation	22	5		
B142	inhumation	39	1		
B144	cremation	22	1		1
C009	cremation	25	1		1
C010	cremation	32	1		
C014	cremation	49	1		
C021	cremation	44	2		
C027	cremation	22	1		1
C054	cremation	22	1		1
C067	cremation	34	1		1
GD01	?		1		
GD02	?		1		
GD04	?		1		
GD16	?		2		

Fig. 3.9. Statzendorf, Lower Austria: Hallstatt period graves with textile tools. (© Karina Grömer, data after Rebay 2006).



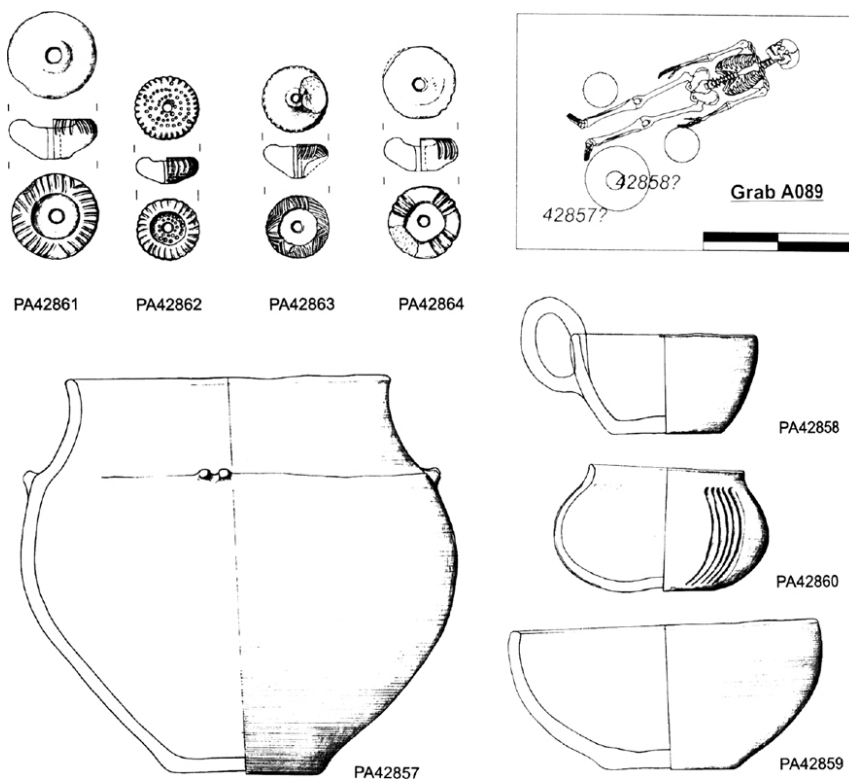


Fig. 3.10. Statzendorf, Lower Austria: “Poor” grave A089 with four spindle whorls. (After Rebay 2006, taf. 62).

Thus, the iconographic evidence and grave assemblages provide evidence of female producers involved in spinning and weaving. Other textile production activities, such as processing flax, combing wool, dyeing, cutting cloth and sewing are not found in the iconographic depictions, while in burials, besides spindle whorls and loom weights, only needles, knives and shears can be noted as tools useful in textile production. However, they are very rare in the graves. Furthermore, needles and shears appear in the graves of both sexes (e.g. at Pottenbrunn: Ramsil 2002, 87; needle and needle box in the male grave 28/1939 at Hallstatt: Kromer 1959, 198) and these tools could have been utilised for leather work or other functions. Therefore, we have no direct evidence regarding the gender of the craftspeople who processed the raw material, and dyed or sewed textile products.

Organisation of Production – Division of Labour?

The question of the gender of the textile workers is related to our understanding of the craft organisation. It is possible that all stages of production were in the hands of women, and that there were separate groups of workers involved in the various stages of textile production. Generally, textile work involves a great deal of manual work, some of which is rather time-consuming. The processing of fibres and

especially spinning takes weeks, while the weaving of a piece of cloth from the spun yarn can be accomplished more quickly, but this too can take days (Andersson 2003, 46–48). Cutting and sewing a garment is the last stage of production and can be accomplished very fast compared with the length of time spent on spinning.

Additionally, there are stages within the workflow which require specialised know-how such as special patterns, tablet weaving or dyeing techniques, while others could even be done by children, such as plucking wool. Various sources of evidence at our disposal like the grave finds, the textiles or the workplaces may tell us how many people worked together or if there were specialised workers just for one stage of production.

In this respect, of great interest are the ‘sets’ of tools found in graves. For example Uttendorf Grave 56, which is a very richly furnished female burial as indicated by pottery and exquisite jewellery including six fibulae, some finger- and armrings, a necklace, a bronze belt buckle and glass beads, contained a set of tools consisting of seven stone loom weights, a spindle whorl and an iron knife (Moosleitner 1992, 42). Another example is Grave 1 in Tumulus 159 at Frög, which contained a spindle and four spools (Tomedi 2002, taf. 76).

At the cemetery in Hallstatt, spindle whorls have been found together with needles or knives (see Fig. 3.12; Kromer 1959). A knife could be used for various purposes, including the cutting of wool, yarn or textiles, but also in leather work or cooking.

In the graves of the above-mentioned cemetery in Statzendorf (Rebay 2006), many sets of tools were clearly recognisable (see Fig. 3.9): usually spindle whorls were excavated in the graves together with knives, sometimes with needles. In the very rich female grave A014 from Statzendorf (see Fig. 3.13), six whorls and a needle box were found next to the legs and a knife next to the right hand of the deceased.

Some conclusions can be drawn from the presence and composition of these tool sets with respect to the craft organisation. If in one grave we find tools for spinning, weaving and sewing (i.e. tools relating to different stages of production), then it is plausible that all production stages were in the hands of one person – perhaps though only in this particular case.

Another indication of work organisation is provided by the textiles themselves. Textiles from the salt mines of Hallstatt may serve as an example, although we are unable to ascertain at present if they were locally produced or came from the surrounding villages. Their technical details may reveal indications of their production processes. Thus, many woven fragments with seams and other traces of sewing have survived. Some of the sewing threads are made with the identical wool as the weave (Rösel-Mautendorfer 2011). This may perhaps indicate that the weaving and sewing was done by the same person. Alternatively, the yarn for the seam may have been taken from the textile itself, in which case, the spinner/weaver and sewer of the cloth may not have been one and the same person. The same can be said for the textiles in which the sewing threads are different from the woven fabric.



Fig. 3.11. Uttendorf im Pinzgau, Salzburg, Austria: Hallstatt period cremation grave 303 with loom weights. (After Moosleitner 1992, Abb. 11).

When we consider the tools and workplaces used for textile production in the Iron Age, it is apparent that, at least in some cases, some sort of cooperation must have existed. For instance, several individuals would have been required to work together as a team on 3–4 m wide looms, such as illustrated by depictions on Greek vases (Pekridou-Gorecki 1989, fig. 2). Thus in the case of the 3.70 m wide loom from Kleinklein (Dobiat 1990, 50–58), the warp threads would have been attached to 107 loom weights collectively weighing 118 kg. Handling such a large loom and moving the heddle bars with such a weight on, is hard physical work and requires cooperation. Even handling the weft threads of a cloth over 3 m in width is easier when undertaken by more than one person, if efficient and quick work is required. The weft threads in the Danish Iron Age textiles from bogs (Hald 1980, 152, fig. 139) cross each other at more or less regular intervals, suggesting that several weft bobbins were in use at once, and that two or several women had been weaving simultaneously – passing the bobbins to each other as they met in the middle and then changing the shed. Unfortunately, we have yet to recover a complete Iron Age cloth in Central Europe that would provide the evidence of the same practice.

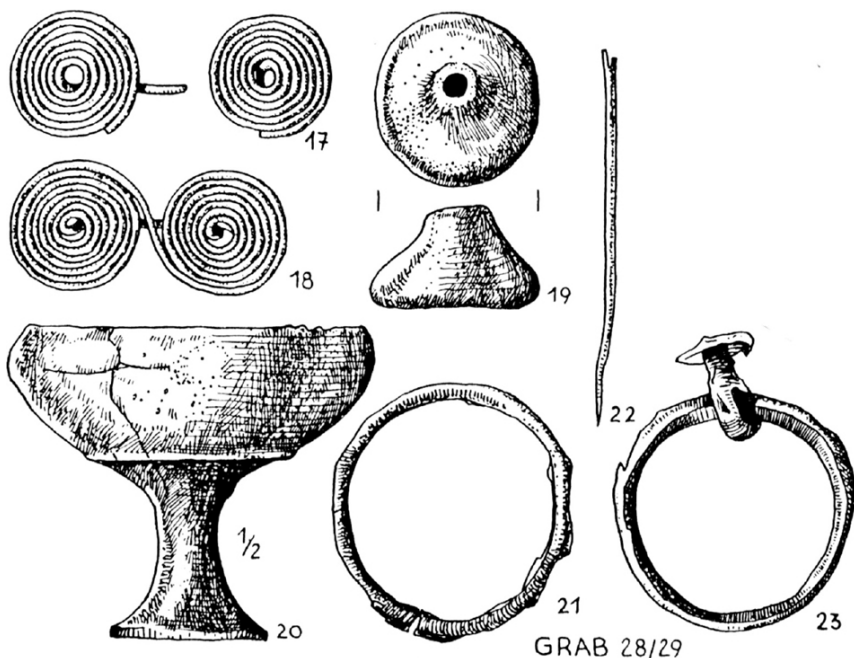


Fig. 3.12. Hallstatt, Upper Austria: Grave 28/29 with a tool set of spindle whorl and sewing needle. (After Kromer 1959, taf. 1).

Research on the division of labour is related to the question of the craft organisation: whether it was done as household work or in workshops, which is typical for the later Roman period (cf. Gostenčnik in this volume). The earliest evidence for specialised textile workers in Austria is known from the Roman period, consisting of the lead *tesserae* (Martijnse 1993; cf. Gostenčnik and Radman-Livaja in this volume) with job titles such as *fullo* or *excisor* (see Fig. 3.14). There is no written indication that the division of textile work in Austria had its roots in the Iron Age, but it is likely, based on the large looms and specialised and high quality items (e.g. tablet-woven bands).

Social Status of the Textile Producers

As has been seen hitherto, only women are depicted spinning and weaving, and textile tools are predominantly found in female graves. Who were these women? According to Alexandrine Eibner (1986; 2000–01), the study of iconographical data of the Early Iron Age in comparison with written and pictorial sources from ancient Greece, suggests that there are two different levels of understanding the pictures. On the one hand, the spindle and textile work has a symbolic-ritual value, as it is not only an attribute of the mistress of the house but also of female goddesses. The scene on the famous urn from Sopron perhaps refers to similar symbolic aspects. On the other hand, perhaps the depictions simply inform us that spinning and weaving were the major occupations of women in the Hallstatt period. In keeping with their role as housewives and mothers, they are illustrated at their domestic work with spindle and loom.

Although female graves contain spindle whorls, loom weights, needles as well as sometimes spools and distaffs, these tools are not recovered from every single female grave. Does this indicate a special social status of the women whose graves contain them (cf. Gleba 2008, 174–175)?

It is possible that a spindle or a loom weight in such a rich grave like Uttendorf symbolises that this woman was a mistress of the house or the head of the household (see Eibner 2000–01, 108ff). In ancient Greece, such high-status women held the responsibility for caring for and controlling the textile production in their household. Producing goods for their own household needs as well as the specific luxury items required for the representation of rich families and for rites of hospitality were important duties entrusted to these high-status women (Wagner-Hasel 2000, 105ff). I suggest that a similar situation could be argued for the Hallstatt Culture as well. The Early Iron Age textiles in central Europe (e.g. Hallstatt: highly decorated tablet weaves, extra fine basket weaves, textiles dyed with insect dyes), as well as the jewellery in the graves illustrate that the representation and demonstration of power and status of a person was not only expressed by luxurious jewellery and weapons, but also by precious, elaborate, highly patterned and fine clothing.

It is noteworthy that in the Hallstatt period in Austria, ‘poor’ as well as ‘very rich’ women (based on their jewellery and other non-perishable grave goods such as pottery) have textile tools in their graves (e.g. see Fig. 3.10). The spindles in ‘poor’ graves as in Statzendorf are perhaps merely a symbol of ‘womanhood’, a symbol of a woman’s contribution to the community as a female person spinning and weaving for her own family’s needs (cf. Gleba 2008). In an Early Iron Age society, it is also possible that she even spun and wove for trading in the market.

Where did the Textile Producers Live and Work?

In the Iron Age Austria, we know of various types of settlements: small villages, lowland settlements in rural areas and hilltop settlements, which when fortified served as the centres for its region. A quick overview of the Iron Age sites in Austria shows that, in nearly every settlement where larger parts have been excavated, textile tools such as spindle whorls and loom weights were recovered. Needles or shears are also recorded. The recently excavated and well-analysed settlement of Göttlesbrunn in Lower Austria (Griebl 2004) may serve as an example. The site was occupied during the 7th and 6th centuries BC and belongs to the Kalenderberg-Gruppe, a regional group of the Hallstatt Culture located in Lower Austria and Burgenland. In this settlement, dwellings and outbuildings have been identified. In some of them – although not all – textile tools were discovered (Fig. 3.15). In some cases, loom weights were found in a row demonstrating that the loom was in use when the house was destroyed.

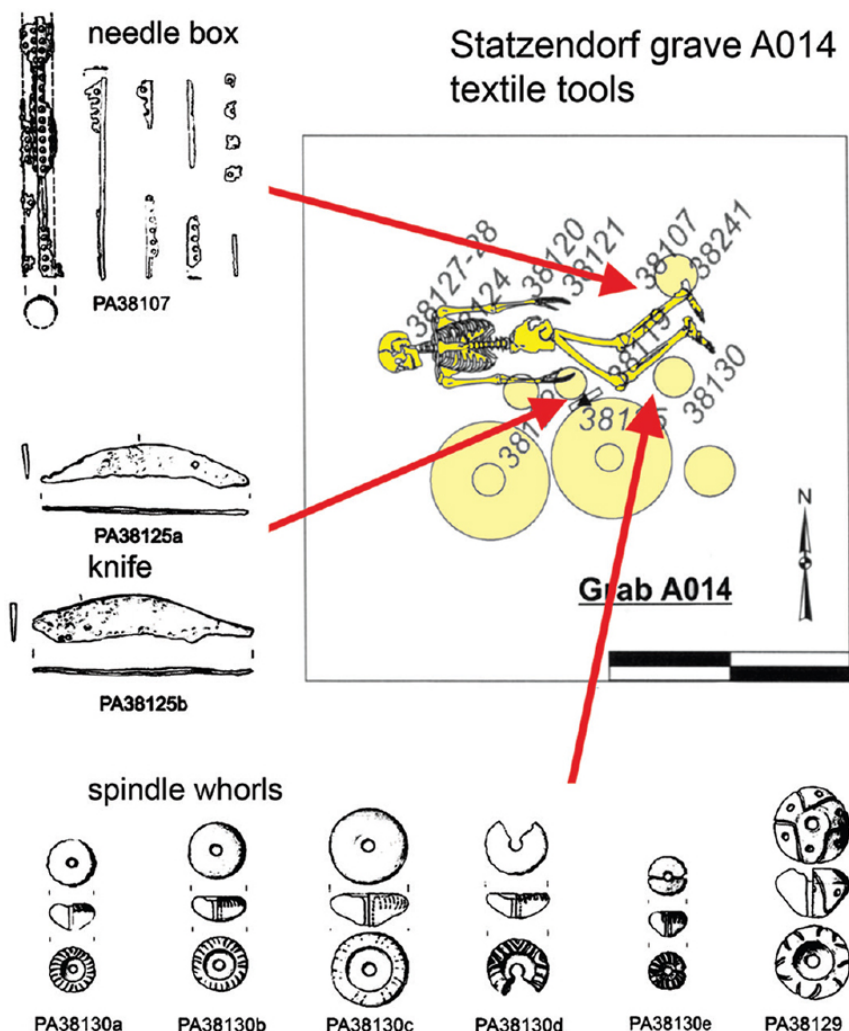


Fig. 3.13. Statzendorf, Lower Austria: “Rich” grave A014. Shown are only the textile tools and their position: 6 spindle whorls, 2 knives and 1 needle box. Not shown: bronze sheet girdle, bracelets, rings, fibulae, amber beads and vessels. (After Rebay 2006, taf. 14).

There is also a Hallstatt period weavers’ hut found at the lowland settlement of Michelstetten (Lauermann 2000). Throughout the entire settlement, over 100 spindle whorls were found. Moreover, on a fortified hilltop settlement SalzburgHellbrunnerberg (Hallstatt period), a great number of spindle whorls and needles were recovered (Stöllner 2002a, 110; 1996, 101, taf. 88).

Is there a difference in textile tools among the lowland settlements, smaller villages and large fortified settlements? When the 3.70 m wide loom was discovered at Kleinklein (Dobiat 1990), it was considered that a special loom of this size was connected to the prominence of the large hilltop settlement.

Kleinklein was an important regional centre and the *Fürstensitz* (princely residence) of the noblemen buried in the huge burials nearby. Thus, it was thought that the big loom indicated a special, elite textile production there. However, later discoveries proved that such exceedingly wide looms are not only associated with fortified hilltop settlements, but can also be found in smaller lowland sites (Fig. 3.16) like Hafnerbach (Preinfalk 2003, fig. 12).

As far as the archaeological evidence is concerned, in terms of textile tools no great difference between smaller villages and hilltop settlements in Iron Age Austria has thus far been discerned. The evidence of textile tools in the settlement indicates that textiles were produced everywhere on a household level, primarily for domestic purposes. Yet, the textiles from the Hallstatt period are sometimes very fine and attest to complicated production techniques; therefore, sometimes specialised production could be suggested (see Grömer 2010, 232–235).

In the following section, two case studies are presented – Hallstatt and Dürrnberg. Both of these sites were economic centres of their time, based on mining and trading salt. They demonstrate how different geographic circumstances resulted in different solutions to the logistics and maintenance of daily life.

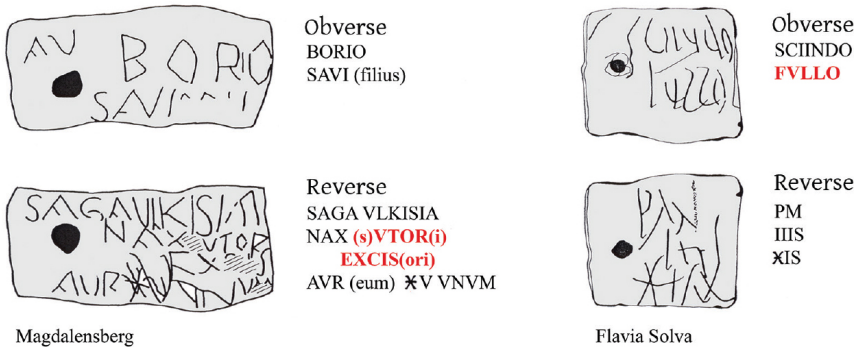


Fig. 3.14. Magdalensberg, Carinthia and Flavia Solva, Styria, Austria: lead tesserae with job titles, Roman period. (After Martijnse 1993).

Case Study 1: Hallstatt

Hallstatt (Fig. 3.17; for an overview of the site see Kern, et al. 2009) has given its name to an era of European prehistory, the Early Iron Age from 800–400 BC known as the Hallstatt period. The site of Hallstatt comprises three different prehistoric mining areas. The entire complex of prehistoric salt mines was exploited from the Bronze Age to the Roman period. Due to impregnation with salt, organic materials including textiles survive extremely well here and span a time period from the 15th to the 4th centuries BC. There are over 550 single fragments which date to the Hallstatt period.

Hallstatt period textiles present a wide range of well-preserved textiles with different weaves, patterns, colours and qualities. Moreover, in the Hallstatt cemetery, some mineralised textiles on metal objects were found. They are comparable with the finds from the salt mines. Regrettably, we did not find the corresponding Hallstatt period settlement. There are only a few textile tools from Hallstatt, for example from the La Tène period settlement at Dammwiese (Grömer

2010, fig. 27) situated at a height of 1357 m. The question arises as to where in the narrow Salzberg Valley at Hallstatt were the places needed for textile production and – more importantly – the human resources situated?

About 1500 graves have been excavated to date in the cemetery of Hallstatt, most of them dating to the Early Iron Age (Kern et al. 2009, 124f). Typically, spindle whorls are found in contemporary female graves throughout Central Europe, perhaps indicating that the deceased had participated in textile production. At Hallstatt however, the picture is different. Out of the 1500 graves, only 31 (Fig. 3.18) contained textile tools such as spindle whorls, needles or loom weights (which is 1.5% of the total number of graves)! That is a very low number, compared with other contemporary cemeteries elsewhere. Can we presume that those whose graves contained spindles produced textiles, and others did not? If this is correct, given how time-consuming textile work is, this number of people involved in textile production would be too low to furnish the entire community with the textiles they needed.

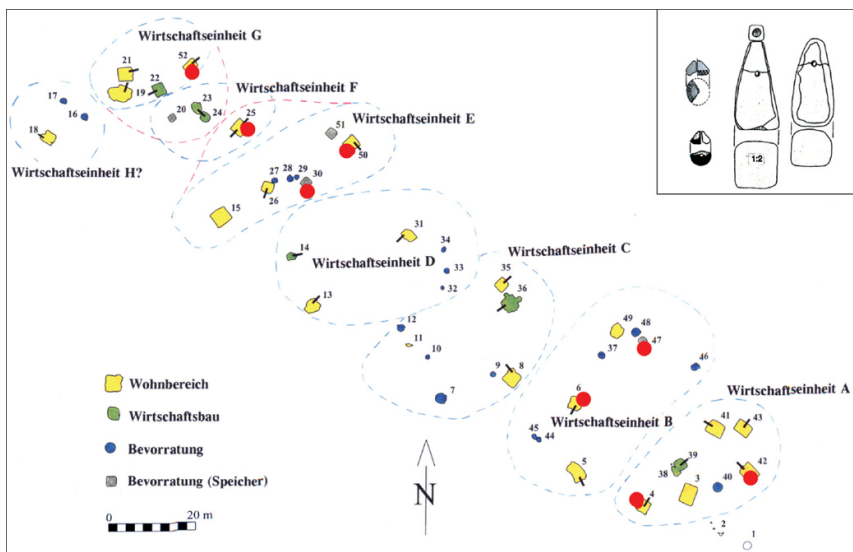


Fig. 3.15. Göttlesbrunn, Lower Austria: Hallstatt period settlement with textile tools in the houses. (After Griebel 2004, fig. 74).

It has been suggested that the entire population living in the Salzbergtal (men, women and children) were employed in the salt-mining activities (Reschreiter 2005, 14). Women's and children's shoes found in the salt mine support this hypothesis, as does the osteological analysis of the skeletons from the recently excavated graves. It appears that men hauled the salt up and the women carried it out of the mine (Pany 2008, 136–141). Furthermore, there is not much space in the narrow Salzberg Valley for resources needed to produce items of daily use such as food, pots and textiles for such a large community (cf. Kowarik 2009). This carries with it the implication that the inhabitants of this area would have had to import many goods from outside their village in Hallstatt.

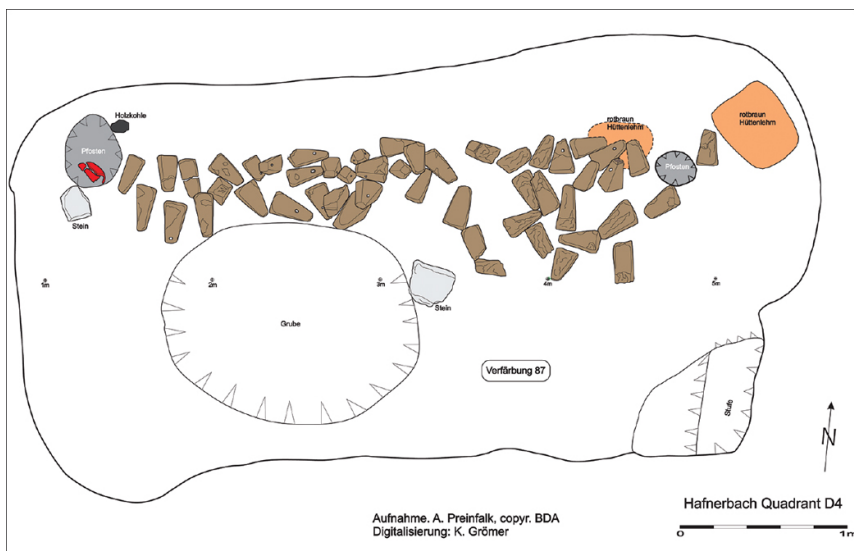


Fig. 3.16. Hafnerbach, Lower Austria: *in situ* find of 4 m wide loom with over 50 loom weights. (After Preinfalk 2003, fig. 12, © Bundesdenkmalamt, Austria; Drawing: Karina Grömer).

In recent years, a multidisciplinary research team has been working on subjects such as the economy of Hallstatt. For example in 2008, a pottery-analysis was published, showing that some of the pots were made in Hallstatt itself, i.e. they were not imported as previously assumed (Herold 2008, 144–147). This new research requires the revision of previous hypotheses and it is no longer certain whether the producers of the textiles lived in the Salzberg Valley of Hallstatt or if the textiles were imported/traded to the site. Some sort of exchange to obtain items for daily life is likely. In the northern flat hinterland of Hallstatt (Äußeres Salzkammergut, the region around Gmunden, and the lakes of Atter- and Mondsee, as well as the Alpenvorland), we find the resources that are necessary for extensive textile production. This includes cultivation areas for plants (fibre dyestuffs), pastureland and human resources which are not involved with salt-mining. In this area, some settlements were excavated, and in all of them spindle whorls and loom weights were found, sometimes in large quantities, for example at the hilltop settlement of Buchberg next to the present village of Attersee (Eibner 1975, fig. 3), or at Waschenberg near Wimsbach-Neydharting (Pertlwieser 1970), Ansfelden (Trebsche 2008, 156–158) and Asten (Leskovar 1996). All of these settlements are situated near the river Traun, which is a very important trade route from Hallstatt north towards the Danube. Perhaps some of the textiles found at Hallstatt came from that region.

The Hallstatt textiles themselves can provide some indications of their origin through an analysis of their weaving techniques and subsequent comparison fragments from Hallstatt with textiles from other regions, in terms of the patterns and details like the use of single or plied yarns, preference of different weave structures etc. Twills with a spin pattern, made of single yarn (Vače Type: Bender Jørgensen 1989, 144ff) are well known in the Eastern Hallstatt region (Austria,

Hungary, Czech Republic, Slovenia), while wool twills with plied yarns (twill Sz/z) are characteristic for the Western Hallstatt region (south Germany, France, Switzerland). The latter type is rare in Hallstatt. The main corpus of the woven fabrics from the salt mines belongs to the textile repertoire of the Eastern Hallstatt region, and the patterns on the tablet-woven ribbons are similar to those found on the pottery of this area.

Thus, the current research suggests that the textiles found in the salt mines of Hallstatt may perhaps have come from outside the Salzberg Valley, as there are few resources to produce them there. Technical details provide us with a hint that the producers of the textiles could have lived in the Hallstatt hinterland, like Alpenvorland or somewhere else in the Eastern Hallstatt region.

Case Study 2: Dürrnberg

Dürrnberg near Hallein (Stöllner 2002b; 2005) was a flourishing mining, workshop-and trade centre, which was partly contemporaneous with Hallstatt and followed it as the economic centre of its time. Like Hallstatt during the Bronze and Early Iron Ages, Dürrnberg was a leading salt producer in the La Tène period. It was primarily occupied between the 6th and 1st centuries BC, continuing into the Roman period. Most finds from the site, including the main corpus of textiles, derive from the early La Tène period.

Many different areas of salt mining and a great number of rich graves have been excavated. In contrast to Hallstatt, the settlement areas at Dürrnberg are also very well preserved. The prehistoric settlement sites were examined systematically by Cordula Brand (1995) for the site organisation, workshop- and production areas. The settlements date from Ha D to LT C. The cemeteries were situated around the peripheries of the settlements.

Besides salt mining, which was the main economic activity on Dürrnberg, various other crafts are attested on the site by specific tools and the remains of workshop debris (Brand 1995). There is evidence for the production of some luxury goods, such as sapropelite and metal jewellery (e.g. fibulae), production and processing of food, wood as well as metal working, pottery production – and of course – textile production. The salt trade on a local and interregional basis favoured long-lasting contacts with Bavaria and the neighbouring regions to the north-west, to the south-east Alpine area and – in later times – to Bohemia and central Germany.

Different sources thus provide information about the identity of textile producers. Over 600 textiles have been recovered from the salt mines of Dürrnberg (Stöllner 2002b; 2005). Rich burials contained remarkable jewellery, belts and fibulae, which sometimes preserve textiles on them. Burials have also produced textile tools, such as spindle whorls and shears, in higher quantities in comparison to the Hallstatt cemetery (Penninger 1972, e.g. taf. 2, 3, 11, 14). The settlement areas, such as Dürrnberg-Ramsaukopf yielded spindle whorls, loom weights, needles and shears (Fig. 3.19; Irlinger 1995, taf. 76–81).

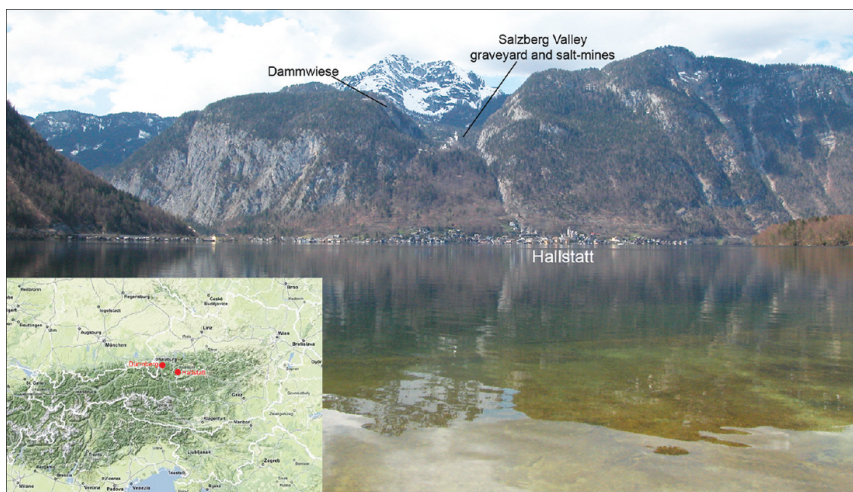


Fig. 3.17. Hallstatt, Upper Austria: overview to the site, in front the Hallstättersee. (© Natural History Museum Vienna, Prehistoric Department).

Interestingly, in contrast to the specialised workshops which occupied specific areas in the settlement, textile production took place throughout the settlement and in nearly every house, as suggested by the distribution of textile tools (see Fig. 3.20). At first sight, this might indicate that textiles were only produced at household level. An examination of the technical details of the Dürrnberg textiles, however, informs us that – in contrast to the creative textile products of the Hallstatt period – now there is a predominance of standardised and easily producible goods. As Katharina von Kurzynski (1996, 36) suggested, the quality of the Dürrnberg textiles is indicative of mass production. According to her, it is possible that this large-scale textile production was organised on a household level or as workshop production for trade. The one fact that we are sure of is that the Dürrnberg settlement attests to the presence of textile producers, perhaps even textile traders and – certainly – consumers.

Conclusion

We are indebted to various sources for our knowledge of the pre-Roman Iron Age textile production on the territory of Austria, such as well-preserved textiles, grave finds, textile tools, archaeological evidence in settlements and depictions of textile producers and their products.

We can find evidence of their activities in each settlement, where they lived and worked. Spindle whorls, loom weights and needles in graves may indicate that the deceased who were accompanied by these tools were textile workers, and furthermore, point to a special social status these persons occupied in their communities. Particularly during the Early Iron Age, predominantly women have textile tools in their graves, sometimes even being accompanied by tool sets (e.g. spindles and knives or spindles and needles). Depictions of textile work, such as on the Sopron Urn and the Bologna *tintinnabulum*, illustrate different stages of the textile production process from spinning to weaving.

The two case studies of Hallstatt and Dürnbach demonstrate that textile production in Iron Age Austria was organised in various ways, providing diverse archaeological evidence concerning the producers, consumers and traders of textiles. Textile production and trade in the Iron Age in general can be thought of as highly multi-faceted, depending on the geographical position and size of the settlement, the status of its inhabitants, as well as their economic circumstances. It is important to underline that, from the Hallstatt period onwards, there is evidence of a highly developed textile art and a well-organised textile production – at a household level and, perhaps, even the first mass production in workshops. The textiles and tools clearly demonstrate that there is a continuous development from the beginning of the Iron Age to the Roman era, when the territory of Austria was incorporated into the Roman Empire as the provinces of Noricum, Raetia and part of Pannonia (cf. Gostenčnik in this volume).

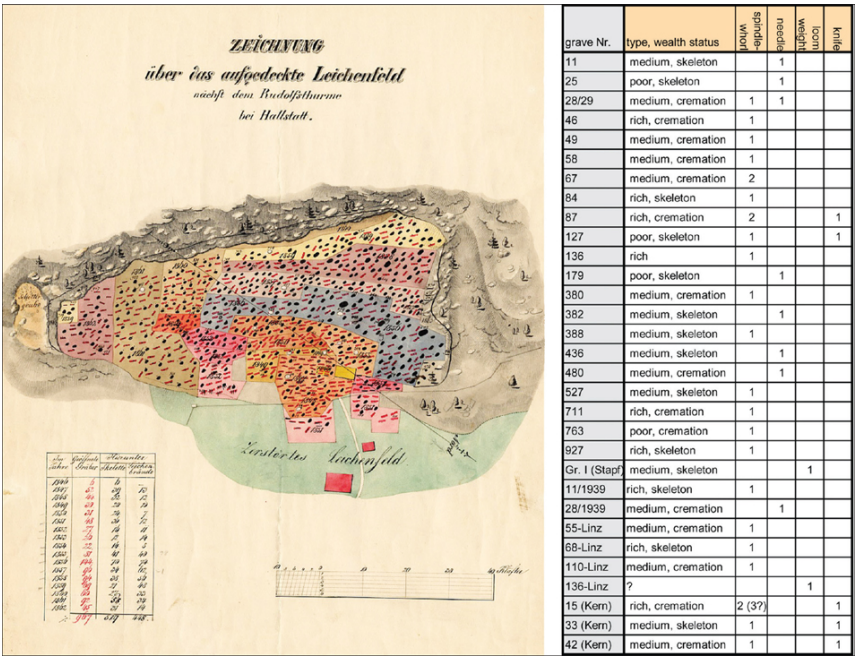


Fig. 3.18. Hallstatt cemetery, Upper Austria: left – water colour of the excavations in the 19th century by Johann Georg Ramsauer; right – list of graves with textile tools. (© Natural History Museum Vienna, Prehistoric Department and Karina Grömer).

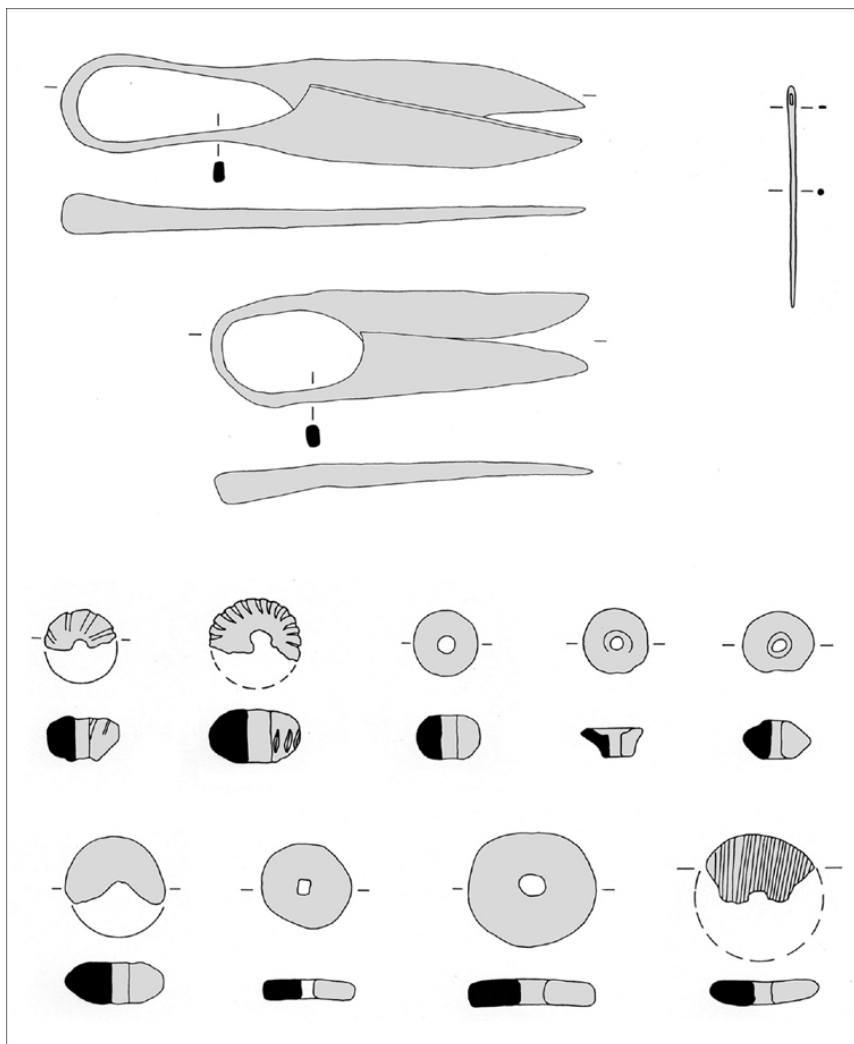
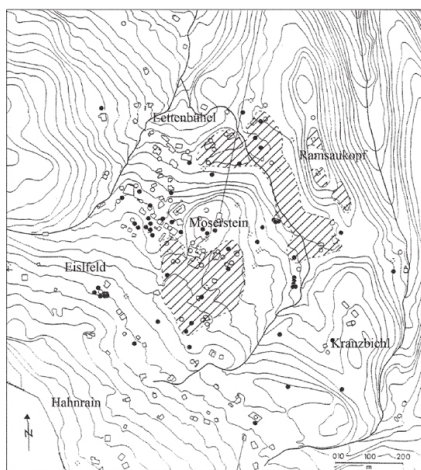
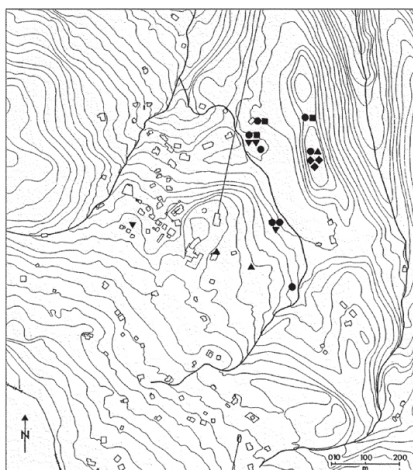


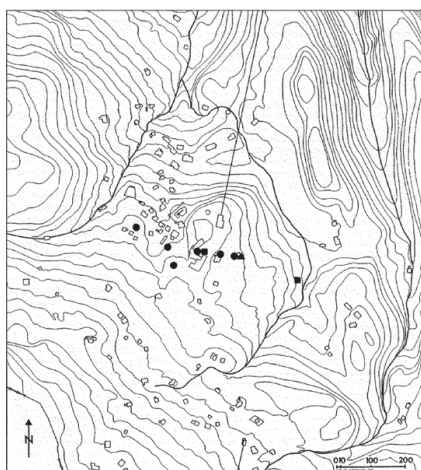
Fig. 3.19. Dürrnberg, Salzburg, Austria: textile tools from the settlement on the Ramsaukopf, La Tène period. (After Irlinger 1995, taf. 76–78).



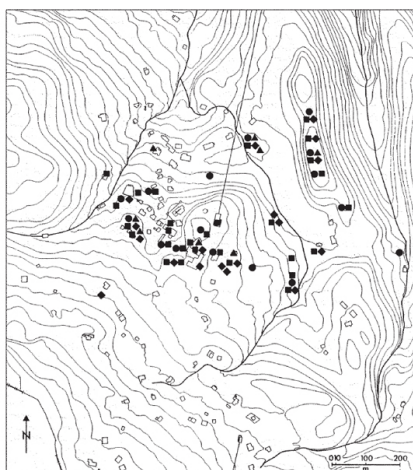
Iron Age settlement areas (after Moosleitner)



traces of bronze-casting



traces of glass workshops



traces of textile production: ■ whorls ▲ weights ♦ play-stones

Fig. 3.20. Dürrnberg, Salzburg, Austria: settlement areas and distribution of bronze casting areas, glass workshops and textile tools. (After Brand 1995).

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¹ For places mentioned in the text, See Map II.

4. Textile Production and Trade in Roman Noricum

Kordula Gostenčnik

Introduction

The history of the economy of the Roman provinces is based on a variety of different sources: written evidence of daily life like papyri or writing tablets, which are rather rare outside Egypt or a few find spots with favourable preservation conditions for organic materials; further, written sources like graffiti and inscriptions, which are available almost everywhere; Greek and Latin literature; and the interpretation of iconographic evidence and archaeological finds, the latter depending largely on how thoroughly the finds from a site are studied and presented. The reading of all these sources is largely dependent on the basic interests of the scholars, who try to interpret what is available to them (e.g. Vittinghoff 1990). However, textile tools are usually a rather neglected source, as they are fairly unprepossessing, for instance spindle whorls made from broken pottery or loom weights made of coarse loam. Within temperate climatic zones, the textiles themselves perished long ago, and their next to complete lack in the archaeological record results in many archaeologists remaining unaware of the importance of textile production in the economy of the Roman world: yet, textile production was the second most important economic branch after agriculture in the economy of the Roman Empire (Droß-Krüpe 2011, 2 and n. 6). This unfortunate situation is further complicated by most of the textile tools not being sensitive towards chronology, as they do not contribute much to the closer dating of archaeological contexts, and this – in addition to the vanished textiles – is another reason why they are seldom published at all. Yet, in the case of Noricum, even if an unusual number of written sources exists, actual centres of textile production and trade were identified only quite recently on the basis of the tools.

Roman Noricum

Noricum was a Roman province in the Eastern Alps (see Fig. 4.1), the latter forming a formidable east-west barrier across the region. The mountains considerably limited communication in whatever direction to a very few roads and passages.¹ The domain of native Celtic tribes under the hegemony of the Noricans was occupied by the Roman army in 15 BC under Emperor Augustus (27 BC-AD 14). At the time, however, the region was no longer economically independent, as the rich sources of iron ore and gold, and the local technology of steel production had engaged Roman interest much earlier. This resulted in the establishment of an

emporium on Magdalensberg (see Fig. 4.1) decades before the Roman invasion, the import of vast quantities of Mediterranean goods and the re-organisation of the southern regions of Noricum to meet the Roman merchants' demands for shipping goods throughout the country. The legal status of a Roman province was accorded to Noricum during the reign of Emperor Claudius (AD 41–54) by the middle of the 1st century AD.

The northern boundary of Noricum at the River Danube formed part of the Roman frontier system or *Limes*; the river was also one of the main long distance traffic routes. The legionary fortress at *Lauriacum* on the Danube's southern shore was built towards the end of the 2nd century AD, which also had a positive impact on the economy of the towns in the north and their hinterland. As Noricum is divided in two halves by the main ridge of the Alps, the re-organisation of the Roman provinces under Emperor Diocletian (AD 284–305) took into account these geographical circumstances when Noricum was divided into *Noricum ripense* in the north and *Noricum mediterraneum* in the south. After Rome's Western Empire disintegrated, the Roman population of Noricum ripense was evacuated to Italy in AD 488. In the south, however, the complete breakdown of the Roman culture occurred much later, around AD 600, when the region was overrun by Slavic tribes and the hillfort settlements were abandoned for good.

Textile Tools and Centres of Textile Production

Textile tools are an elusive source, as it is impossible to ascertain how large the amount once in use really was, since in many regions, only those that were made of durable materials survived. Clay spindle whorls or loom weights hint at what they once were mounted onto, namely wooden spindles and warp-weighted looms with wooden frame and shed-rods. Yet, what if wooden whorls and looms other than the warp-weighted type were employed? In such a case, the tracing of textile production in any given archaeological context becomes next to impossible.

Two sites in southern Noricum, namely the early Roman town 'Old Virunum' on Magdalensberg and the Roman *municipium* (autonomous town) of Flavia Solva, yielded an unusually high number of textile tools in comparison with other sites. The quantities allow identifying both as centres of textile production and trade. However, towns are by no means the sole models of how both production and trade might have been organised. Therefore, rural sites, i.e. the Roman *villae*, are to be taken into account as well, since they regularly yield textile tools. Furthermore, a marble relief wallled up in a church in the town of Salzburg (see Fig. 4.9.a) depicts a scene of garments being packed, similar to the one on the famous Igel column and other such monuments. Considering the numerous villas and smaller farmsteads especially in north-west Noricum (Fig. 4.7), textile production could well have been an important source (among others) for the wealth of their proprietors, as otherwise this relief would not exist.² Textile production was, therefore, most definitely organised in different ways, depending on the character and environment of a site and the demands that were to be met.³

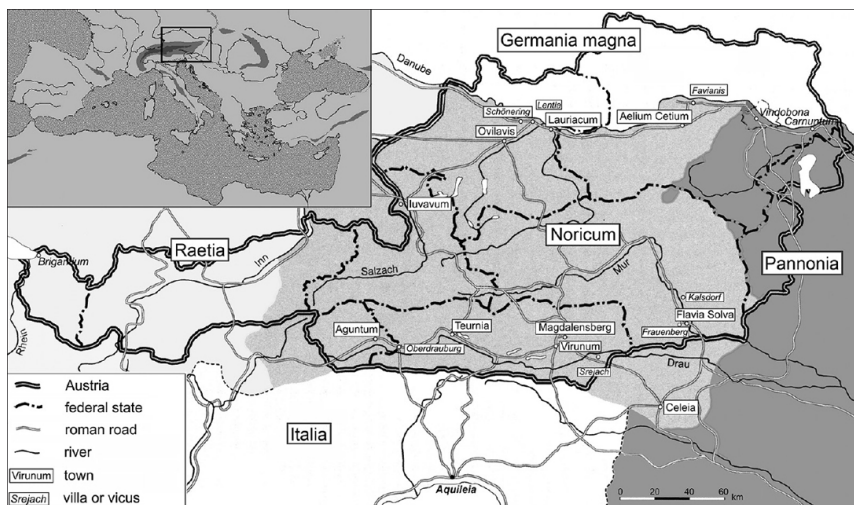


Fig. 4.1. Austria and its Roman provinces. (Drawing: E. Schindler-Kaudelka; addenda by Kordula Gostenčnik).

‘Old Virunum’, the Early Roman Town on Magdalensberg

Merchants from north-east Italy, mainly from Aquileia, built an emporium on a mountain, today called Magdalensberg, in Carinthia in southern Austria by mid-1st century BC, more than three decades before the Roman conquest of 15 BC. This town flourished as a centre of both commerce and production. Here, merchandise was sold in wholesale quantities from all over the Mediterranean. In addition, workshops organised either by the merchants’ staff or at least in close cooperation with the workshop owners, were occupied with the manufacturing of merchandise in iron, steel and copper alloys. As revealed by numerous graffiti on the walls of a warehouse, a very simple way of book-keeping, metal merchandise was ordered and sold in wholesale quantities as far as Rome (Egger 1961; Gostenčnik 2010c).⁴

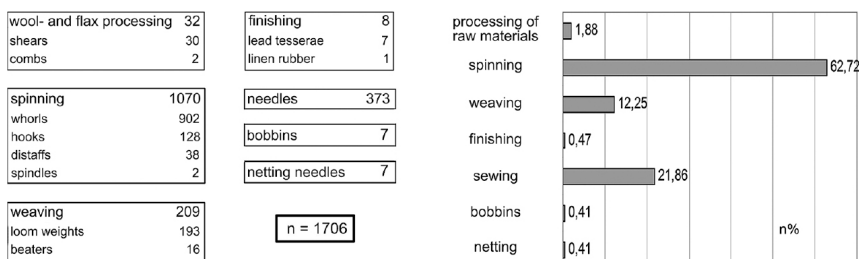


Fig. 4.2. Magdalensberg: statistical analysis of textile tools. (After Gostenčnik 2010a, fig. 2).

Summaries of the Magdalensberg textile tools were recently published (Gostenčnik 2009; 2010a; 2011); therefore, the present chapter provides only a short overview. During more than 60 years of archaeological fieldwork, ‘Old Virunum’ yielded a large quantity of textile tools (Fig. 4.2), covering the entire

chain of production. Although sheep rearing and the cultivation of flax are tasks of the rural economy, the two extant wool combs perhaps indicate that unprocessed wool was also prepared in town either for spinning or for felt making (cf. Bitenc 2002, 28, fig. 3). Shears, on the other hand, are multifunctional and were thus not necessarily employed by sheep-shearers alone. As sewing was one of the main activities in the Magdalensberg textile business, shears were by all means also needed for tailoring; the presence of tailors is confirmed by graffiti on lead *tesserae* (cf. below).⁵

Among 1070 implements for spinning (see Fig. 4.3), 902 are spindle whorls, mostly made from recycled pottery (Fig. 4.3.a-b). The weight distribution of 637 complete whorls (Fig. 4.4) shows peaks in the low range, indicating that they were used for spinning fine yarn.⁶ Apart from the whorls, the Magdalensberg material also includes 127 spindle hooks in bronze and one in iron; two hooks with a tubular socket stand out against the rest with either twisted or plain shanks. Such hooks are well attested in southern Noricum from the 2nd half of the 1st century BC to the 2nd century AD, but do not appear to be common in neighbouring regions. However, such hooks were used in considerable numbers among Germanic tribes in the Oder-Vistula region in Poland from the final La Tène to the Migration period, and in Roman and Coptic Egypt (Gostenčnik 2001; 2003), but cross-cultural influences are difficult to establish at present. The rest of the Magdalensberg spinning implements, namely distaffs and ring distaffs in bone and glass (Fig. 4.3.g-j) or whorls made from amber (Fig. 4.3.e), do not figure among tools of daily use, as they are prestigious and symbolic items and are frequently recorded among the assemblages of rich female graves.⁷



a



b



c



d



e

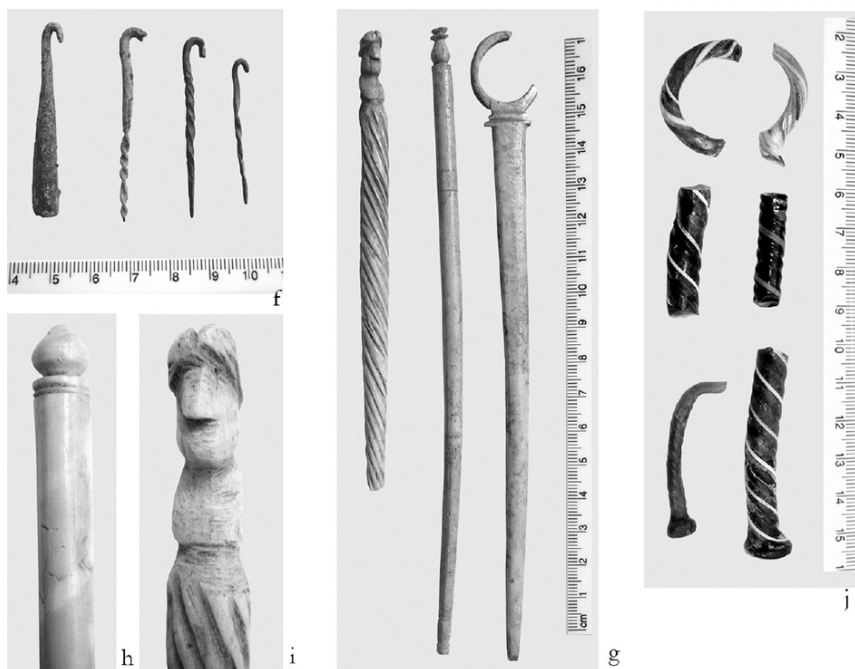


Fig. 4.3. Magdalensberg; whorls: a-b recycled pottery, c worked bone, d wood, e amber; f spindle hooks in bronze; distaffs and ring distaffs: g worked bone, h-i details; j glass. (After Gostenčnik 2010, figs 5–7).

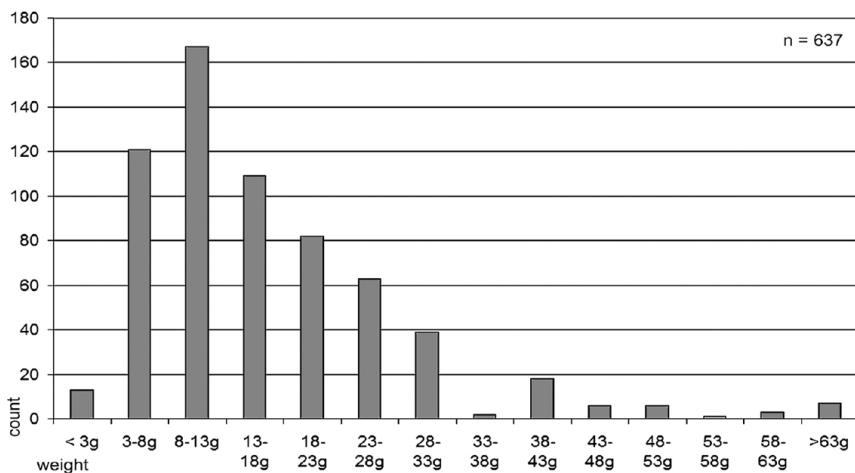


Fig. 4.4. Magdalensberg; weight distribution of whorls (n = 637).

Magdalensberg hitherto yielded 193 loom weights, but almost always as single finds only, except for one set of 18 and a few in twos and threes. Their weights range from 0.095 to 1.40 kg. Although mortar seems to be an unusual raw

material for those tools, nearly half of the Magdalensberg loom weights are made of it (Fig. 4.5.b left and right). The number of looms the weights were once attached to, is difficult to ascertain, as their contexts are not studied in detail yet.

Whether the two-beam upright loom could have been used on Magdalensberg is an unsolvable problem; its introduction by way of Aquileia or one of the textile centres in north-east Italy might be hypothesised when considering the much higher number of whorls and needles against the weights, but as long as no surviving wooden structures are found or a textile fragment with a tubular warp comes to light, this question remains open.

Other weaving tools found on the site include sword beaters made from bone (Fig. 4.5.c). One of them (Fig. 4.5.c top) is inscribed with a slave's name *P(h)ilargi* in genitive (Fig. 4.5.d), a rare occurrence, on this type of small finds, of written evidence for a man working as a weaver (Gostenčnik 2005a, 351, Pl. 56.1; 2008, 171, Pl. 3.38; cf. Moeller 1969). The beaters are easily discernible among the worked bone assemblages, because they bear traces of warp threads on their surfaces (Fig. 4.5.e).⁸

Noricum has yielded numerous lead labels or *tesserae plumbeae*, of which several are connected to the textile business (Egger 1961–63; 1967; Römer-Martijnse 1990; Martijnse 1993; cf. also Radman-Livaja 2011 and in this volume). Five labels from Magdalensberg (Fig. 4.5.h) indicate the presence of finishing establishments and tailors⁹ (cf. 'written sources' below). Even if no fullery is hitherto known in this town, such establishments must have existed to meet the demands of its inhabitants. The context in which a glass linen rubber was found (Fig. 4.5.g) provided no indication as to where it was used, e.g. in a private household or a fullery.

Even though 45 iron needles out of the total number of 373 were found together among the debris of a burned warehouse on Magdalensberg dating from the early years of Emperor Claudius (AD 41–54) (Fig. 4.5.f), this large amount is exceptional with respect to the average numbers of these artefacts recorded on Roman sites.¹⁰ Sewing or mending therefore must have been a major activity in the processing of textiles in this early Roman town, which is underscored by the texts on the lead labels (cf. below).

As the emporium on Magdalensberg was run by merchants from north-east Italy, the town's textile production was most probably also organised and run by textile firms from that region or in close connection with its textile centres, similar to the processing of metal, otherwise the establishment of textile production in this economic centre in southern Noricum would be difficult to explain. Considering the amount of textile tools, many of the inhabitants on Magdalensberg must have earned their living from the textile business, employed by contracts and controlled by the local staff of Roman merchants or textile companies. As the tools are scattered all over town and mixed with household refuse, textile production was definitely based on outwork instead of centralised production in workshops (cf. Drexhage et al. 2002, 111; but cf. also Droß-Krüpe 2011, 151–169 on small workshops).

Municipium Claudium Virunum, the First Capital of the Province

The town on the mountain was abandoned by the mid-1st century AD during the reign of Emperor Claudius (AD 41–54), and its inhabitants moved to a new city

(*municipium*) established on virgin soil down on the plains of the Zollfeld on one of the main routes of the province, some 10 km to the south-west of the old location. The old town's name was transferred to the new place as well (see Fig. 4.1), and this second Virunum on the plains became the first capital of the entire province from the mid-1st to the later 2nd century AD (Piccottini 2002).



a



b



d

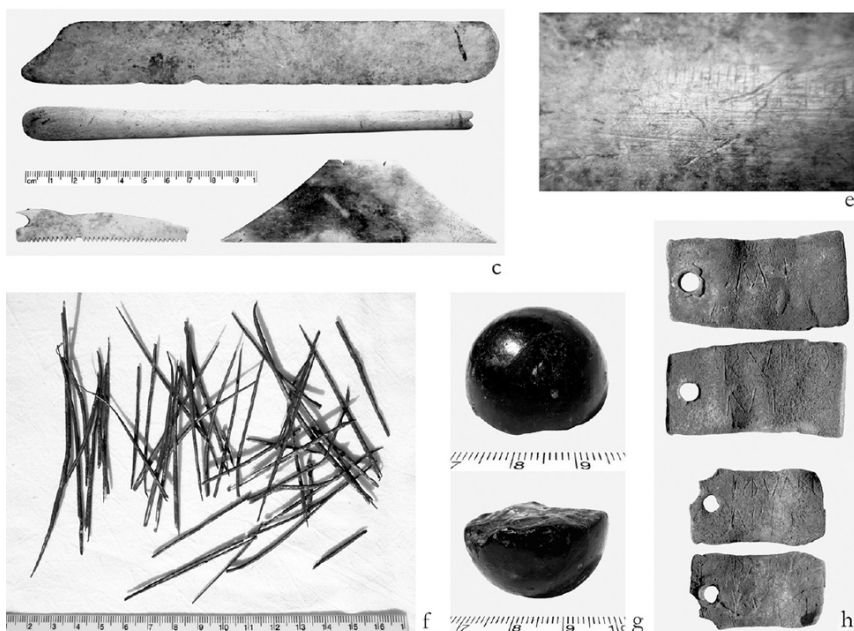


Fig. 4.5. Magdalensberg; a-b loom weights; c beaters; d graffito *P(h)ilargi* on sword beater; e traces of warp threads on sword beater; f hoard of iron needles; g linen rubber; h lead labels. (a-g after Gostenčnik 2010, figs 9–13; h after Dolenz 2006, figs 2 and 4).

Imperial Virunum never yielded large amounts of textile tools. During 10 years of excavations in the town's western outskirts, not a single spindle whorl or loom weight was unearthed; the only textile tools found were a limited number of needles, one spindle hook and a fragment of a bone distaff similar to the one in Figure 4.3.g-h (Zabehlicky-Scheffenegger and Gostenčnik 2002, Fig. 8.87–88; Gostenčnik 2006, 55, fig. 4.38). Excavations at the turn of the 20th century yielded a few spindle whorls, loom weights and needles, besides a double-sided wool comb and a number of weft beaters (Fig. 4.6.b-d) made from cattle ribs (Praschniker and Kenner 1948; Gostenčnik 2010b). When rescue excavations in 2004 revealed structures from the late 2nd century AD which were interpreted as remains of a fullery (Dolenz and Polleres 2004), 30 loom weights of different sizes were also recovered from various areas of the site (Gostenčnik 2010a, 86–87, figs 14.17–14.18; 2012, 71–73, fig 2.7; in preparation) besides a spindle hook and two needles in bronze. Considering that only the parts of the site which were endangered by construction work were excavated, the actual number of weights present beneath the untouched soil may well be estimated to up to ten times higher. Two *fullones* are known from the lead labels found at Virunum (Martijnse 1993, Nos 92 and 100); unfortunately these were stray finds discovered with a metal detector and their exact find spots were not recorded.

It is difficult to locate fulleries outside the Mediterranean world, so it is by no means surprising that hitherto no such structure has been identified in Noricum, even though quite a number of graffiti on lead labels refer to *fullo* (Römer-

Martijnse 1990, 213–225; Martijnse 1993, *passim*). As local pre-Roman traditions of fulling also existed in the Alps and beyond,¹¹ warm garments being a necessity to survive the climate, the reason may well be that structures and furnishings known, e.g. from Pompeii, Rome or Ostia are not suitable models for the identification of fulleries in Noricum and elsewhere outside the Mediterranean. Furthermore, their furnishings may well have been made from wood, or fulling could also have been undertaken in the backyard of a house by using wooden vessels.¹² Warm garments for the winter period were vital, so it is possible that their production was undertaken in several small workshops all over the province to meet the demands of the regional inhabitants, and furthermore, also by the households themselves. The Virunum workshop is not published in detail yet, so further discussions will have to wait until the results are available. Compared with the big fulleries in Ostia or Rome, the Virunum workshop is unlikely to have met more than the demand of its neighbourhood for cleaning and fulling.¹³ Virunum's archaeological evidence plainly underscores that in contrast to the older town on Magdalensberg, it was not a commercial centre and textile production played no major role in the town's economy.

A Roman *vicus* at present St. Michael, some 2 km to the north of the Roman *municipium*, yielded a few spindle hooks and needles in bronze from the 1st to early 2nd century AD contexts (Dolenz 2003, 134, fig. 12). These finds demonstrate that both spindle and whorl were made from wood and had vanished long ago; even if no further textile tools made of durable materials are extant on the site, the hooks underscore the problems caused by the perishing of wooden specimens in the archaeological contexts of Austria. Further conclusions based on such results should therefore always be regarded with caution.

Municipium Flavium Solvense and its Territory

The south-east of Noricum was the domain of *Flavia Solva* (see Fig. 4.1), one of Noricum's autonomous towns which was inhabited from the 1st to the 4th centuries AD. A related pre-Roman settlement has been identified on nearby Frauenberg. Early wooden structures dating from the period of Emperor Augustus are present at Flavia Solva, but they are oriented differently from the later rectangular structures of the imperial town (cf. Hudeczek 2002; Krenn 2003). Solva has been extensively excavated for decades, but only a limited number of detailed reports exists (Groh 1996; Hinker 2006). The excavations produced hundreds of loom weights weighing 0.7–1.4 kg,¹⁴ several of which are marked with graffiti or stamps (Wedenig 2008; see Fig. 4.6.e-n). The wool comb or weaving comb in Fig. 4.6.o was excavated in *Insula XXII*, where several loom weights were found as well. In spite of this, tools for spinning (spindle whorls, distaffs, hooks) and sewing (needles) are rare, so textile production in Solva appears to have been organised differently from Magdalensberg. Spinning, in particular, was a task chiefly performed outside the town in the case of Solva.

As extensive publications are rare, the chronology of the majority of Solva's textile tools is unclear; therefore any possible peaks in the production throughout the centuries are impossible to detect. Excavations in Flavia Solva provided evidence of several handicrafts and workshops, among others for the processing of metal and glass. The economy of this town was evidently based on production and distribution of everyday goods. In contrast to the early Roman period of Noricum,

production and trade at Solva were not run by companies from north Italy any longer. Based on the textile tools from Solva, when compared with the small numbers of such tools from the other towns of Noricum, a possible regional specialisation in production may be assumed during the Imperial period. However, as such economic structures are not visible yet throughout Noricum for lack of more extensive excavation reports, for the time being this is no more than a hypothesis. Most recent research on the textile guilds of the *centonarii* by Jinyu Liu (Liu 2009; and in this volume) might however underscore such a role, as a *rescriptum* of October 14th AD 205 by the emperors Septimius Severus and Caracalla found at Flavia Solva and addressed to a guild of the town's *centonarii* lists 93 names of such craftsmen active at the time (Liu 2009, 340–341, no. 39, including bibliography; Lafer 2001). Their name itself derives from the so-called *centones*, special cloths used for example, for fire-fighting. Their immense number at Solva and the term deducible from a piece of equipment renders the fact less astonishing that the Solva *centonarii* were hitherto regarded mainly as the local fire brigade (cf. the arguments discussed in Lafer 2001). Considering their occupation, namely the processing of discarded textiles or rags, the question of centralised production arises. The textile task the *centonarii* were involved in – sewing or quilting as revealed by Cato (Agr. 2.3) – depended on the kind of merchandise produced. Considering the Austrian “Fleckerlteppich”, a rug woven with rags in the weft, weaving may also have been done. As they were occupied with the production of low-priced textiles, garments as well as other merchandise like the *centones*, and furthermore, the military equipment suggested by Jinyu Liu (various coverings, possibly also horse blankets and the like), the orders of their clients and customers came from very different backgrounds (Liu 2009). The Roman army as a client would explain the huge number of *centonarii* at Solva, as bulk orders for any new equipment occupied the work capacity of many and had to be carried out quickly, which means that the specialists must have been already present in town before such an order came. This production left no traces in the archaeological record, and it is also impossible to identify it from the extant loom weights or needles for lack of a closer chronology of their contexts.

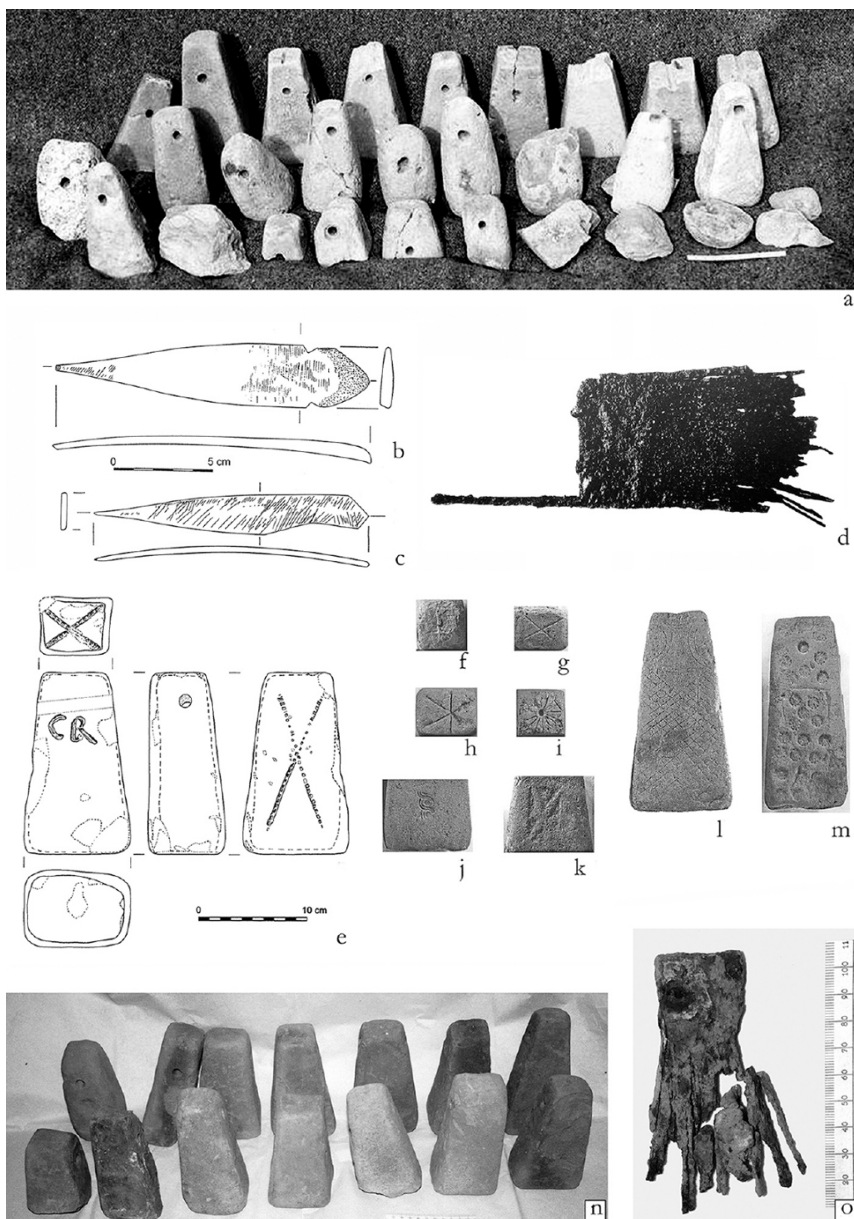


Fig. 4.6. Virunum: a loom weights, b-c beaters in bone, d wool comb; Flavia Solva: e-n loom weights with details, o iron wool or weaving comb. (a after Gostenčnik 2010, fig. 17; b-c after Gostenčnik 2006, pl. 4.36–37; d after Praschniker and Kenner 1948, fig. 135.8044; e-m after Wedenig 2008; n-o after Gostenčnik 2012, fig. 2.8c-d).

Within the nameless vicus under present-day Kalsdorf (see Fig. 4.1) a hoard of

203 lead labels was found, 133 of which are inscribed.¹⁵ Besides hinting at the presence of a fullery, the labels could well have been collected as scrap metal to be used in a local bronze workshop. Kalsdorf was not a centre of textile production, and the recovered textile tools (spindle whorls, hooks, loom weights and needles) are not numerous.¹⁶ However, considering the size of the Roman *vicus*, it could well have housed a fullery where garments were cleaned and faded clothes were newly dyed or bleached.¹⁷

The Limes and its Hinterland

The northern extent of Noricum along the Danube Limes (see Fig. 4.1) does not abound with textile tools.¹⁸ Several of the Roman towns and settlements are completely overbuilt by modern structures so that archaeological research is limited to rescue excavations in advance of construction work.

In the 1950s, extensive archaeological fieldwork concentrated on Lauriacum, the civilian town (*canabae*) of the legionary fortress, dating primarily to the 3rd-4th centuries AD (Ubl 1997). Although thousands of finds were recorded, the number of textile implements from Lauriacum remained low, indicating that textile production was not a major occupation of the town's inhabitants. A rare exception is a complete loom found *in situ* with 25 loom weights of about 1 kg each (Jenny et al. 1959, 84; Gostenčnik 2012, fig. 9a). A bronze heddle (Wieser 1999; Gostenčnik 2012, fig. 9d) was found at the beginning of the 20th century within the fortress, and one of the graves yielded a late Roman ring distaff terminating in a *Venus pudica* (Kloiber 1962, Pl. 29, Grab 84, 2; Gostenčnik 2012, fig. 9g).

At the *municipium Aelium Cetium* (see Fig. 4.1), today's St. Pölten, loom weights are still present in 4th century AD contexts (Jilek et al. 2005, 118; Gostenčnik 2012, fig. 9h). A triangular weaving tablet was found close to the loom *in situ* in *Lentia*/Linz (Fig. 4.1), a unique artefact among Noricum's textile equipment (Karnitsch 1962, pl. 30.10).

The situation at *Favianis*/Mautern (see Fig. 4.1), a small military fortress of the 2nd to 4th/5th centuries AD on the Danube surrounded by villages, is somewhat different. Excavations in the *vicus* (civilian settlement outside a smaller military fortress) yielded loom weights regularly; this was already observed in older excavation reports, but also during more recent fieldwork.¹⁹ Spindle whorls and needles are, on the other hand, relatively rare, so spinning and sewing were most likely done elsewhere. As Mautern had numerous workshops for production of durables of daily use and for food production, it is not astonishing that textiles also formed part of the village's economy. Research in Mautern has hitherto not focused on the textile tools, so that possible changes in production throughout the centuries are not in evidence.²⁰ However, considering the long chronology of *Favianis*, the amount of textile tools from the site does not seem to be above the average known from any other site in Noricum. Therefore, its identification as a textile centre has to be made with considerable caution.

Villa Economy in Noricum and Textile Production on the Territory of Iuvavum

The production of textile fibres and textiles were not new occupations when the Romans took charge of the area, but textile production in the Late Iron Age in Noricum is hard to establish, as data for the 1st century BC are still missing.²¹ Most

recent excavations of Roman villas in southern Noricum on the territory of Virunum and Solva produced data on the final La Tène period before the Roman conquest. They suggest that the local elite gradually adopted Roman customs and turned their lodgings into fashionable villas of Mediterranean style during the 1st century AD.²² Even though not many of the sites identified or assumed as a villa or smaller farmstead are explored in detail yet (see Fig. 4.7), textile tools are regular finds in these locations (see Fig. 4.8). However, from the textile tools it is impossible to ascertain the organisation of production, namely weaving for private use or for trading purposes. On the territory of Flavia Solva, spinning utensils seem to be more frequent in the villas than in the town itself.²³ It is thus possible that the yarn used to produce cloth in Solva may have come from the villas on the territory of this town. At Grafendorf in the north-east of the town's territory, a set of 22 loom weights was found in the debris of a hypocaust, dating from the turn of the 2nd to 3rd century AD (Führholzer 1996). The rescue excavations in the Roman villa at Srejach on the territory of Virunum (see Fig. 4.1) hitherto yielded about 20 loom weights weighing approximately 1.2 kg each, spindle whorls and a bronze hook from pits dating to the third quarter of the 3rd century AD, when this estate was destroyed (see Fig. 4.8>.a-d; Krenn 2009–10; Gostenčnik 2009–10). Another set of 10 loom weights was excavated at a supposed villa at St. Agatha near Mellach to the north of Virunum (Jantsch 1931, 17). According to the excavation report, the baths of the Roman villa at Schönering (early 2nd to late 4th centuries AD) on the territory of Ovilavis (Fig. 4.1) were in its later days possibly turned into a habitation unit and workshop for weaving and other professions, as several loom weights were recovered, primarily in the top soil layers (Engelmann 2000).

The north-western part of the province is particularly dense with *villae rusticae* and smaller farms (Traxler 2004, Beilage 1). The rural villages and villas on the territory of Salzburg yield textile tools regularly.²⁴ The relief in Fig. 4.9.a, immured in a church in Salzburg (Heger 1975, 33, no. 52, pl. 22.52), is the easternmost example of the packing scenes well known from Igel, Neumagen and other sites (Schwinden 1989). It underscores the prominent role textile production must have held in the economy of the territory of Iuvavum, as otherwise this subject would not appear in a tomb relief from this region. Since marble from the nearby quarries of the Untersberg was used for the relief, it also definitely originated from a local workshop. The Secundinii's role in the textile trade on the territory of the Treveri has been variously interpreted: they are regarded either as major landowners who used the working capacity of tenants in the less productive seasons (Wild 1999, 34; 2002, 28), or as textile merchants who controlled the textile trade throughout the province (e.g. Schwinden 1989).²⁵ Whatever model might be illustrated in the Salzburg relief, textile production and trade was by all means an important economic activity in the region, as it found its way into the iconographic program of a funerary monument.

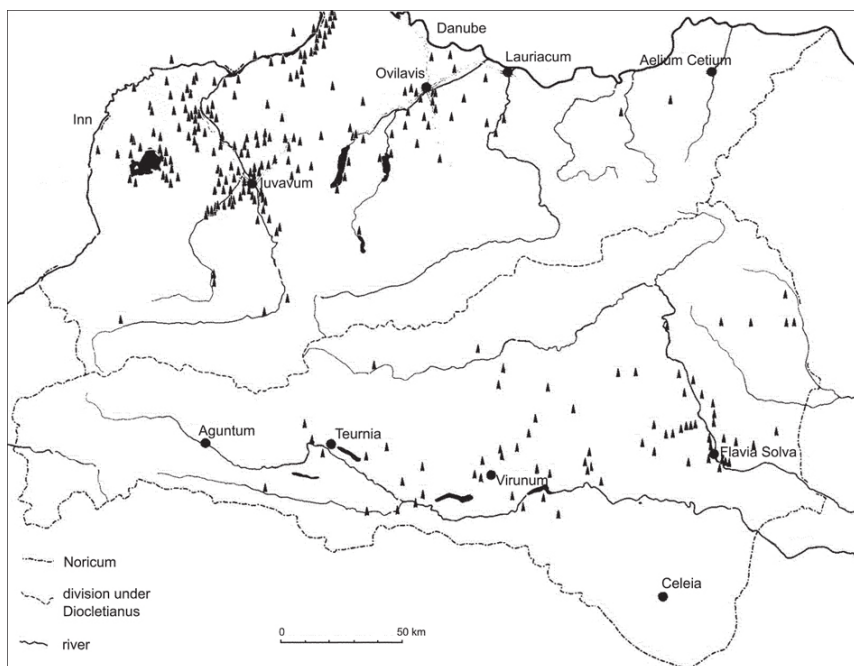


Fig. 4.7. Distribution of Roman villas in Noricum. (After Genser 1994, fig. 17.2, with addenda after Traxler 2004, Beilage 1).

Written Sources

Besides the *centonarii* and the slave's name on the beater mentioned above, there is further written evidence for textile production in Noricum (Römer-Martijnse 1990; Martijnse 1993; Gostenčnik 2005b and forthcoming). Graffiti on hundreds of lead *tesserae* well complement the evidence of the tools (Figs 4.5.h and 4.9.b-h). These labels are present in almost every town in Noricum, although their texts are not exclusively linked with the production and finishing of textiles.²⁶ Besides a few single finds, a hoard of 203 labels was found at Kalsdorf, 85 were unearthed at Flavia Solva, five out of seven finds from Magdalensberg bear texts related to textiles, and Virunum yielded 19.²⁷ According to Elizabeth Römer-Martijnse, they were no longer in use after the early 3rd century AD (Martijnse 1993, 372; cf. Radman-Livaja in this volume).

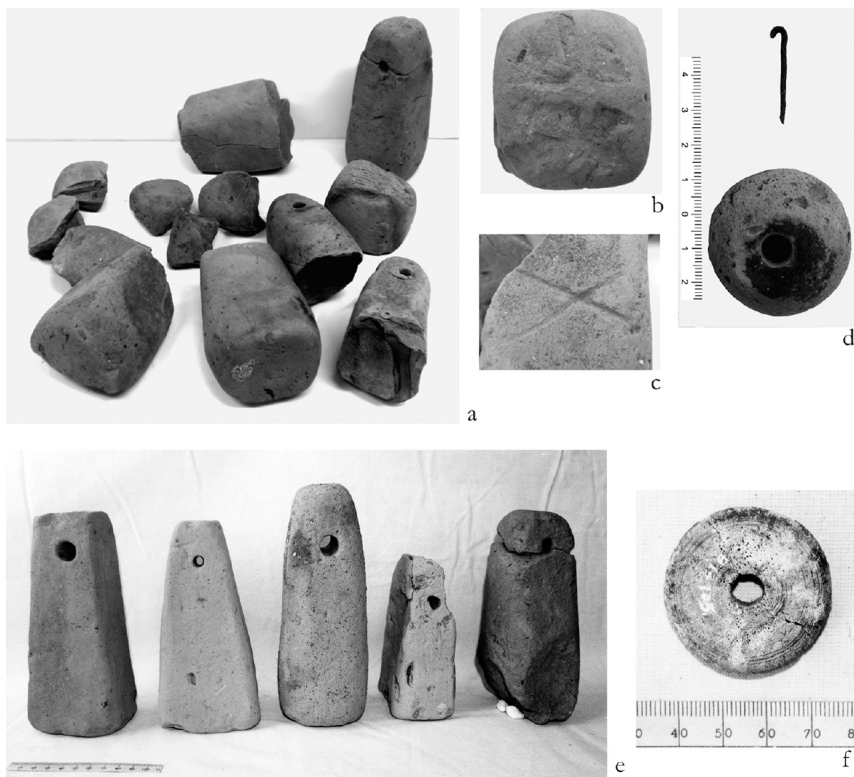


Fig. 4.8. Noricum, textile tools from Roman villas: a-d loom weights, hook and whorl from Srejah; e-f loom weights and bone whorl from Schönering. (Photos: Kordula Gostenčnik).

The texts on the *tesserae* state names, professions, numbers and signs, names of colours and garments, wages and prices. For example, no. 48 from Kalsdorf reads *Ursulus Priscius* on the obverse and *levo* on the reverse; Ursulus Priscius was a customer of the workshop, and *levo* was a job commissioned by him (see below). No. 24 from Kalsdorf reads *Titus fullo* on the obverse, and *pas X XV* on the reverse, that is 'Titus the fuller' and 'mantles of the *paenula* type, 15 denarii'. No. 52 reads on the obverse *pas* and on the reverse *pur* for *paenulas* and *purpur*; no. 70 has *Secuntus fullo* (sic!) on the obverse and *mor* on the reverse for 'Secuntus the fuller' and a colour called *morum* or *morinum* (Römer-Martijnse 1990, nos 48, 24, 52, 70).

Most of the names on the *tesserae* belonged to customers of the fulleries; if the names would have been those of the fullers or any other employee of such a workshop, they would most likely occur more than once on the labels of the Kalsdorf hoard, which they do not (Martijnse 1993, 340). An interesting detail is the occurrence of the words *fullo* and the initial letters of a colour name on the same label (Römer-Martijnse 1990, nos 41, 70, 77, 86). This indicates that a fullery could also dye garments or re-dye faded clothes. According to Borgard and Puybaret (2003), fulleries and workshops for dyeing or wool washing worked separately at Pompeii, so the labels bear evidence of less specialised workshops in

the provinces.

Besides *fullo* (see Fig. 4.9.b), various other words are connected with textiles. On several labels, the abbreviations *pur* (Fig. 4.9.g) and *mor* are extant, but also fully written as *purpur* and *morinum* (Fig. 4.9.d and h) and *murin*, which are discernible as names of the colours 'purple' and *morus* or *morum* 'dark red', from *morus nigra*, the dark mulberry tree and its fruit (Martijnse 1993, 365–366). Further colours on the tags are *louteus* 'saffron coloured'²⁸ on a specimen from Magdalensberg, and the short form of a verb *cocare* at *Immurium*/Moosham in Salzburg, which is either *coc(ili)are* 'to dye purple' or *coc(cin)are* 'to dye scarlet' (Martijnse 1993, 368–369). *Cociliare* instead of the classical Latin word *conchyliare* 'to dye purple' is recorded at Carnuntum in Pannonia (Martijnse 1993, 368). It appears that diverse shades of red were much in demand.

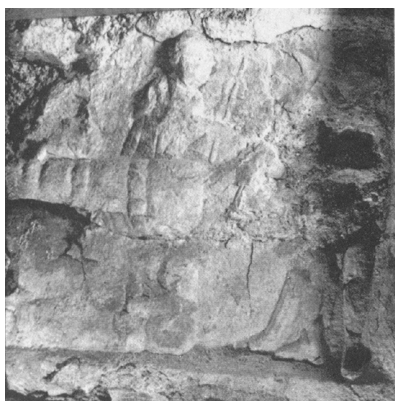
Different steps of finishing textiles in the workshops are mentioned, but always in an abbreviated form; unfortunately not every group of letters has a clear meaning (Römer-Martijnse 1990, 216–217; Martijnse 1993, 364–365). Among those that are understood is the word *ruc* (see Fig. 4.9.c), also abbreviated as *runcum* and *runc*; according to Römer-Martijnse, the basic word is *runcare*, 'to weed' or 'to root up' and stands for 'trimming of the nap'. A tool called *runcina* is also related to it, meaning a carpenter's plane. The word *isp* (Fig. 4.9.e), *ispre* or *ispave* is most likely derived from *hispidare*, that is to 'roughen up' the surface (e.g. to raise the nap) before trimming it with cropping shears. And finally *levo* (Fig. 4.9.c; cf. *levare* 'to smoothen, to polish' and *levis* 'smooth, polished') is the last step, namely to smooth out the creases and to polish the surface, e.g. by means of a wool press. The words *sul* and *sulpur* are clearly discernible, a further step in the processing of textiles in a fullery, namely bleaching them or freshening up slightly faded colours (Römer-Martijnse 1990, 241). Unprocessed wool is possibly recorded on a label from Carnuntum which reads in colloquial Latin *velinum* for *vellimnum* (cf. *vellus* or 'fleece'; Martijnse 1993, 368).

Sewing is confirmed by the *tesserae* as well. No. 84 from Flavia Solva reads *sar pas* for *sarcire paenulas*, to mend cloaks of the *paenula* type.²⁹ On the Magdalensberg labels, tailors and wages for their work are recorded; one reads:³⁰ *paenulae III X VI IIS I sutori* on the obverse, *novae X aureum I excisori* on the reverse, that is '3 cloaks of the *paenula* type, 2 denarii each, 1 sestertius for the *sutor*' and '10 new (cloaks), one aureus (= 25 denarii) for the *excisor*'. A *sutor* is understood as a tailor by Egger (cf. n. 9) who mends rather than makes new clothes and is paid with a sestertius, whereas the *excisor* cuts new clothes and earns a gold coin (*aureus*). The huge difference in the wages of both underscores the differences also of their tasks and possibly also of their reputation.

Most of the garments on the labels are different types of cloaks. One *tessera* from Bregenz in Raetia has *paenulas* on the reverse (Martijnse 1993, 283–288, pl. 25), so the interpretation for *p(aenul)as* and *pae(nulae)* (see Fig. 4.9.b) was suggested based on it. Another cloak is listed as *cas* (Fig. 4.9.f) for *casula*, but also *m* for *mantus* or *mantellum* is found. One label from Solva reads *bana*, most likely a short form for *banata*, as the latter is observed on a label from Carnuntum (Martijnse 1993, no. 108). Special types of such warm garments are also known from the Magdalensberg labels: the *gausapum*, a most renowned product from Patavium in north Italy and thus imported, and the *sagum ulkisianum*, either an import from *Ulcisia Castra* in Pannonia (Szentendre in Hungary), or a garment with a special

cut known under that name. Further abbreviations refer to weight (*p* for *pondo*) and prices (*aureus*, *denarii*, *sestertii*). It is interesting to note that work was not only calculated based on the number of garments, but also based on their weight.

Finally, a *tessera* from Magdalensberg has been interpreted as a link between the town and *Patavium*/Padova, one of the centres of wool production in north Italy (Bonetto 2001). The text reads on the obverse *Liccaia et / Trauseus / [...]* *anaeus*, on the reverse *gausapa VIII / m(antus) / X X / IIS I (libellas) V / sutori unum* (sic!), i.e. ‘Liccaia and Trauseus ...anaeus’ who according to Jacopo Bonetto are two business partners (woman and man), and ‘eight *gausapa*’, the letter ‘m (for *mantus*)’ is scribbled below, ‘10 *denarii* (for the *gausapa*)’, followed by ‘1.5 *sestertii* for the tailor for one (*unum* instead of *pro uno*)’. *Liccaia* and *Trauseus* are names well documented in north-east Italy, leading Bonetto (2001) to suggest that they came from *Patavium* and opened up a fullery (?) on Magdalensberg. Unfortunately, none of the big companies from *Aquileia* known from inscriptions found on Magdalensberg can be connected with the textile trade, although *vestiarii* are known at *Aquileia* itself from inscriptions.³¹ At least the tie with *Patavium* is an important indication of the close connections in the textile business between the emporium on Magdalensberg and north-east Italy.



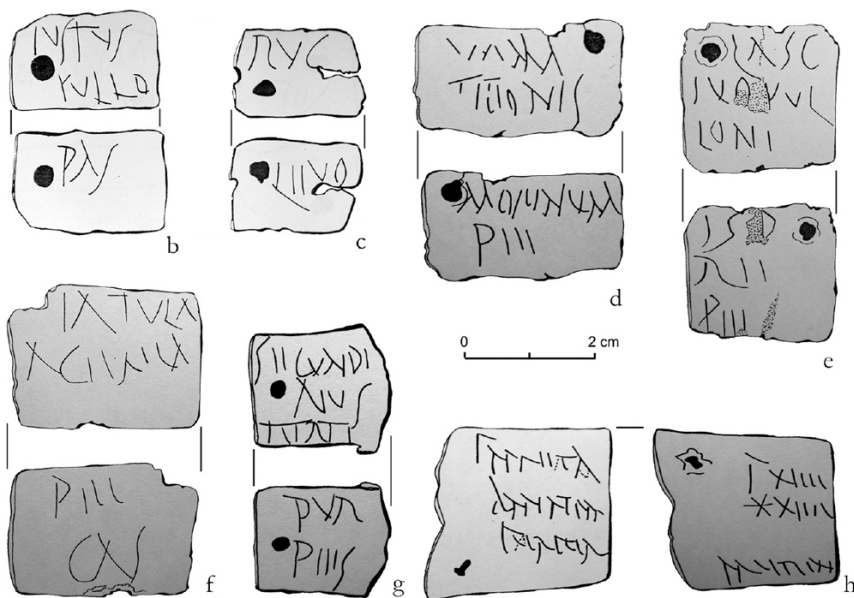


Fig. 4.9. a Packing of garments on a relief from Salzburg; b-h lead labels from Noricum. (a after Heger 1975, pl. 22.52; b-h after Römer-Martijnse 1990, nos 5, 92, 58 and Martijnse 1993, nos 89, 92, 95, 129).

The lead tags are an interesting, but difficult source due to their abbreviations. The interpretation of the *lanarii purgatores* in tomb inscriptions (Zaccaria 2009) points at a different task behind the term *pur* on the lead tags: *purgare* (to clean) instead of *purpureus* (purple). Twenty-six of 133 tags from Kalsdorf contain *pur* (Römer-Martijnse 1990, 223; cf. n. 15) and, considering a Roman ‘dry cleaners’ workshop, *purgare* makes is a much more likely reading (cf. Gostenčnik forthcoming).

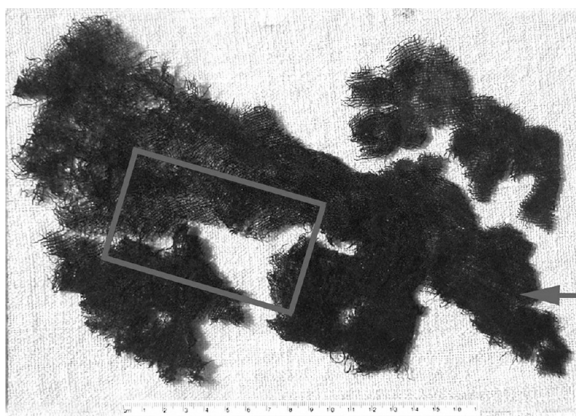
One last epigraphic source is a tomb inscription from the territory of Iuvavum. Its revised interpretation now offers a *tinc(tor)*, probably an artisan who dyed textiles (Thüry 2006).

According to Diocletian’s Price Edict of AD 301, different wool garments were exported from Noricum (§ 19, ed. Lauffer 1971), so they must have been of a quality or cut that was sought after (Martijnse 1993, 380–381); specified are (X = denarius): *burrus Noricus X decem milibus*; *banata Norica duplex X viginti milibus*; *fedox Noricus optimus X decem milibus*; *singilio Noricus X mille quingentis*, and one of those garments among the prices for fulling (§ 22, ed. Lauffer 1971), *in byrro Norico X ducentos*. The *Expositio totius mundi* 57 (Rougé) of the 4th century AD reads *Noricum, unde vestis Norica exire dicitur*; however, it dubs Noricum a town (*civitas*) in Pannonia! If these written sources were missing, textile exports from Noricum would be unknown in this late period, as no archaeological evidence exists that might shed any light on it. In contrast to Aquileia or towns in Pannonia, no *gynaecia* are noted for Noricum in the *Notitia dignitatum occ.* (Wild 1976). The latest written evidence for textiles from Noricum comes from the *Vita Sancti Severini* 26 of Eugippius who witnessed a clothes collection at Teurnia in southern

Noricum (see Fig. 4.1), around the mid-5th century AD for prisoners and poor on the former Danube Limes; constant invasions of Germanic tribes had possibly caused a shortage in textiles already at that time.

Textiles and Iconographic Sources from Noricum

Textiles from Noricum survived as tiny fragments only, most of these in graves dating to Late Antiquity on Frauenberg near Flavia Solva and from Mautern (Grollegger 2002; Grömer 2012b; forthcoming). Three pieces approximately 25 cm long made from linen are preserved on Magdalensberg (see Fig. 4.10.a; Grömer 2009), whereas the usual dimensions do not exceed 1–2 cm². A reliquary shroud from *Lauriacum* supposedly dated to Late Antiquity is not radiocarbon-dated yet. Excavations in the Roman road station in Oberdrauburg yielded a band with bronze fitting (Fig. 4.10.b) from the traditional belt of a female costume (Gömer and Gostenčnik 2009); hitherto these belts were considered to be made of leather. Iconographic representations on tomb stones (Fig. 4.10.d-e) illustrate women in traditional Norican attire including veils, head-dresses and jewellery,³² whereas men clad themselves in Roman-style dress. Among the worked bones from Magdalensberg, the plaque in Figure 4.10.c shows three Roman soldiers and a barbarian, which are easily recognisable from their position but also dress, as the barbarian, down on his right knee and arms bound behind him, has tassels on his leggings, whereas the soldiers' costumes end in the typical *ptyrges* (leather flaps) on their thighs (Gostenčnik 2005a, 143–145, pl. 31.1 and fig. 21.1). Furthermore, shawls with a plaid pattern and tassels are worn by both the barbarian and the soldier in the middle. This drawing was, however, made by a southern artisan and does not necessarily refer to Noricum itself.



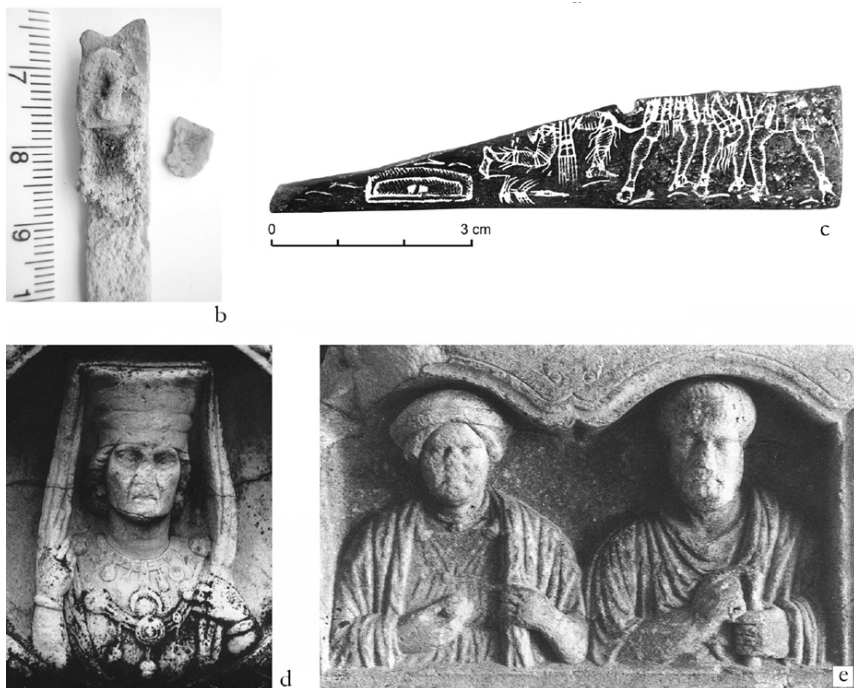


Fig. 4.10. Textiles from Roman Noricum: a Magdalensberg, b Oberdrauburg; c bone plaque with three Roman soldiers and a captive; d Lady from Lendorf; e Married couple from Villach. (a after Gostenčnik 2010, fig. 19; b photo by the author; c after Gostenčnik 2005a, fig. 21,1; d after Piccottini 1972, pl. 11.12; e after Piccottini 1994, pl. 78.639).

Conclusions

When the Romans settled in Noricum around the mid-1st century BC, a new market was opened for trade, and therefore the demands of new customers had to be satisfied as well as exports to Italy and possibly also beyond, as textile production was probably cheaper in this new environment. Besides native local Celts, the inhabitants of the early Roman town on Magdalensberg were merchants and their staff who had immigrated from Aquileia and areas further south, as revealed by tomb inscriptions and graffiti. However, except for a male weaver named Philargus, most probably a slave and of southern origin, no further person can be identified as a textile worker; therefore, whether there was a preponderance of native Noricans or southern immigrants among the textile workers in the local textile production of early Roman Noricum is not deducible from the available sources.

Production of Norican textile merchandise was organised in various ways, as is evident from the sources available for a thorough analysis from three sites: the output from the Roman emporium on Magdalensberg in the early Roman period (50 BC-AD 50) covering the entire chain of production and most likely in close collaboration with textile centres in north-east Italy; a possibly centralised (regional or supra-regional?) production in the case of Flavia Solva in the Imperial

period with weaving as the main occupation, and additional goods produced by several *centonarii*; and textile production in the villas on the territory of Iuvavum/Salzburg in north-west Noricum attested by the scene on a 2nd/3rd century AD relief. There is presently no archaeological evidence to indicate textile exports in the 4th century AD.

The Roman army as a client in the textile business in Noricum is difficult to document. It might well have imported the supplies it needed from elsewhere, as well as requisitioned textiles in case of urgent demand. That the Solva *centonarii* should have worked for the army might be suggested on the basis of military and administrative re-organisations under the Severan emperors, which touched the whole Empire.

The existence of fulleries is documented by the lead labels, although only a single workshop in Virunum has hitherto been considered as such. This situation throws light onto differences in the structures and furnishings of such workshops between e.g. Italy and the Alpine provinces.

Further details on textile production in Roman Noricum will be available in due course, when the analyses of the surviving textiles are published. Supplementing both textile tools and written sources, the textiles will permit us to gain more extensive insight into one of the most important branches of Noricum's economy.

Acknowledgements

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¹ On the history of Noricum, cf. Alföldy 1974 and the chapters focusing on it in Gassner et al. 2002, both include extensive bibliographies; on Noricum's autonomous Roman towns, cf. Šašel Kos and Scherrer 2002; the archaeology of the province is summed up in Fischer 2002; the prehistory of Noricum is discussed in Urban 2000, *passim*.

² The Igel column and similar monuments are amply discussed in Schwinden 1989; on the basis of the iconographic program, John Peter Wild concludes that the textile production of the

Secundinii – major landowners rather than textile merchants – was based on seasonal labour when enough of the labour force, possibly their tenants, was free to concentrate on the production of textiles; cf. Wild 1999, 34; Wild 2002, 28; cf. also n. 25.

³ On textiles and textile production in prehistoric and Roman Noricum, cf. Grömer 2010; 2012a; forthcoming; Gostenčnik 2012; forthcoming.

⁴ Cf. Magdalensberg-bibliography (accessed 2012–07) for detailed references.

⁵ Cf. the tomb reliefs in Larsson Lovén 2001.

⁶ On whorls and their weights in experiments and the iR results, cf. Grömer 2004 or Mårtensson et al. 2005–06, 6–14 (accessed 2012–04).

⁷ On the symbolic nature of textile tools and textile craft, see Trinkl 2004; Cottica 2007; Larsson Lovén 2007. Handicraft tools of any kind are seldom present among the grave assemblages throughout Noricum, neither are professions specified on tomb inscriptions; the only exceptions are two artisans holding tools in their hands on tomb reliefs from the territory of Flavia Solva (Hudeczek 2004, nos 20 and 22). Specialised male weavers of the Late Roman period whose grave assemblages include a heddle are summed up in Migotti 2010; for a *tinctor* cf. below.

⁸ It would be highly useful to publish in detail wear traces on textile tools used in experimental archaeology; at the NESAT X conference in Copenhagen in 2008, Lena Hammarlund presented a wooden sword beater in the poster session with traces of warp threads cut into its surface similar to those seen on the Roman tools from Magdalensberg. Unfortunately, thus far this contribution remains unpublished.

⁹ According to the texts on the lead labels from Magdalensberg and their interpretation by Rudolf Egger (1967), the term *sutor* means tailor in this context (cf. the verb *suere* = sewing), as the graffiti refer to cloaks and not to shoes.

¹⁰ Needles in bronze and iron as well as spindle hooks in bronze were forged in the town as is confirmed by half finished specimens (unpublished).

¹¹ Cf. Grömer 2007, 244–245; 2010, 198, fig. 105 on fulled textiles from the Bronze Age at the Hallstatt salt mines.

¹² Cf. the discussion in Borgard and Puybaret 2003, 311–314; Flohr 2003; Wilson 2003; and Wild 2002, 22.

¹³ The size of Virunum definitely required more than one fullery. According to a personal comment by Heimo Dolenz, the city map possibly gives evidence of another structure similar to the one recently excavated, which was examined over a 100 years ago; unfortunately, this place was not recognised then as a fullery in the excavation reports, so that no further details were noted.

¹⁴ During a project on handicraft and industry in Roman Noricum, about two thirds of the approximately 4000 storage boxes containing the Solva finds were searched for tools and implements; as the exact quantity of the extant textile tools is unknown, they cannot be statistically analysed yet. Whether the wool combs and a heddle which are on display at Flavia Solva museum in Wagna were actually found at Solva is not clear, as the inventory numbers have not been checked yet.

¹⁵ Römer-Martijnse 1990: 201 labels; addenda and two more labels from Kalsdorf in Martijnse 1993, 304–327, nos 86–87.

¹⁶ The excavation report was recently published with selected contexts; cf. Lohner-Urban 2009, with find list on pp 573–608 including textile tools.

¹⁷ Textile production can be identified in every Roman settlement to some extent, but I do not agree with the term ‘textile industry’ used in Sedlmayer and Tiefengraber 2006, 189, who published the results of excavations in a *vicus* at Saazkogel in the east of the territory of Solva, as a mere 10 loom weights do not indicate a local output of textiles in wholesale quantities; the number actually points to household refuse; at best, production surplus may have been sold.

¹⁸ On the evidence of textile tools from various sites in Roman Noricum, cf. Gostenčnik 2012.

¹⁹ About 30 loom weights are recorded in the latest report, cf. Groh and Sedlmayer 2006, *passim*.

²⁰ Mautern yielded dozens of textiles from graves of Late Antiquity, presently studied by Karina Grömer in the course of the project DressID; cf. Grömer 2012b; in preparation. On a bronze distaff from one of these graves, cf. Grömer 2003.

²¹ Textiles and textile production in the Bronze and Iron Ages on the basis of the finds from the Hallstatt salt mines are extensively published in Grömer 2007 and 2012a; cf. also the summary by Belanová Štolcová and Grömer 2010.

- 22 Södingberg: Wagner 2000; Srejach: Krenn 2009–10; Gostenčnik 2009–10; Retznei: Schrettle 2008.
- 23 Barbara Porod and Susanne Lamm, pers. comm.; for textile tools from a Roman villa on the territory of Flavia Solva cf. now Lamm 2011, 77–78.
- 24 Felix Lang, pers. comm.
- 25 For the most recent discussion contra Wild's suggestions cf. Möller-Wiering and Subbert 2012.
- 26 Cf. Egger 1961–63; 1967; Römer-Martijnse 1990; Martijnse 1993. Since Elizabeth Römer-Martijnse focused her research on these tags, several more were unearthed documenting the presence of such items almost in every town in Noricum, but also on rural sites (Reinhold Wedenig, personal comment); unfortunately, most of the new tesserae are not published in detail yet, but cf. Lamm 2011, 83–85 and Wedenig 2012, 131–132 for two.
- 27 Kalsdorf: Römer-Martijnse 1990, nos 1–201 and Martijnse 1993, nos 86–87; Flavia Solva: Martijnse 1993, nos 1–85; Magdalensberg: Egger 1967, passim; Virunum: Martijnse 1993, nos 88–106. The numbers given here are those recorded in Römer-Martijnse 1990 and Martijnse 1993; they may have increased slightly since then.
- 28 Cf. the discussion of the term on the basis of Latin sources in Egger 1967, 199, no. 2; according to Isidor of Seville (19,28,8), *luteus* is the colour of saffron, which has a reddish shade.
- 29 For suggestions other than garments in case of *pas* cf. the discussion in Wedenig 2012, 131–132.
- 30 The abbreviations of the *tesserae* are fully written here, in order to facilitate understanding the texts; cf. Egger 1967. Those in Fig. 4.9 read: b (Kalsdorf) *Iustus fullo* || *p(aenul)as*; c (Kalsdorf) *ru(n)c(are)* || *levo*; d (Virunum) *Amma Titonis* || *morinum p(ondo) III*; e (Virunum) *Lascivo fulloni* || *(h)isp(ida)re p(ondo) III*; f (Virunum) *Iatula Ace[...]la* || *pondo III cas(ulae)*; g (Kalsdorf) *Secundinus Terti* || *pur(pureum) p(ondo) III S*; h (Zillingdorf, Pannonia) *Pameta banatam purpur(eam)* || *p(ondo) XIII X XIII murin(um)*.
- 31 *InscrAq* 687: *loc(us) m(onumenti) vestiariorum* – 'place of the monument of the *vestiarii*'; *InscrAq* 222 and 3490: two *vestiarii*; CIL V 774: a *vestiarius* from Aquileia who died in Istria. Further inscriptions from Aquileia related to textile production are discussed in Chiabà 2003, 274–275, nos 56–64.
- 32 Cf. also the female grave assemblages from Noricum in Garbsch 1965; 1985.

5. Craftspeople, Merchants or Clients? The Evidence of Personal Names on the Commercial Lead Tags from Siscia

Ivan Radman-Livaja

Introduction

The Roman Department of the Zagreb Archaeological Museum holds a very large collection of almost 1200 inscribed lead tags. All these tags were found in Sisak, the ancient city of Siscia, the largest Roman city in south-western Pannonia (Mócsy 1974, 22–23, 112–114, 273; Šašel 1974, 702–741; Hoti 1992, 133–153; Lolić 2003, 131–152). Some of the tags were offered or sold to the museum by individual finders or collectors, but most of them were recovered during the dredging of the river Kupa before World War I. Since the dredging was localised to the very centre of the town, i.e. next to the port quarter, it would seem that all the tags come from this rather limited area, where the excavations done during the 1980s have identified the port facilities of the Roman town.

The collection has not been systematically studied until recently, but it was nevertheless known to historians and archaeologists since it had been mentioned in several publications dealing with objects of this type.¹ A recent PhD thesis presented a complete inventory of this collection (Radman-Livaja 2010; 2012). Taking into consideration the theme of the present publication, I will focus on one aspect of these inscriptions, i.e. the persons mentioned on the tags from Siscia. Nevertheless, a short introductory explanation is necessary before proceeding to a more detailed discussion of the individuals whose names appear on the tags.

Inscribed Lead Tags from the Roman Empire

The Roman lead tags in question are all made of small lead plates, of a more or less rectangular shape, pierced with a hole (sometimes two or three), so that the tag could be attached to the merchandise with a cord or a metal wire (see Fig. 5.1). They are all inscribed, sometimes only on one side, but usually on both sides. Most of the tags were reused several times and thus one can often see traces of older inscriptions, more or less thoroughly erased by the scribe. Therefore, it is often difficult to ascertain with certainty the most recent inscription. It is evident that, when traces of many different inscriptions are present, the reading becomes rather uncertain.



Fig. 5.1. A selection of lead tags from Siscia. (Photo: Igor Krajcar).

Inscribed lead tags have been found on many Roman sites all over Europe, and, considering the increasing number of finds in recent years, there is no doubt that their quantity will keep growing in the future (e.g. for more than a 100 unpublished tags from Gaul see Božič and Feugère 2004, 27). It would thus seem that the use of such tags was quite common in most Roman provinces,² but their systematic study has only begun during the 1950s and 1960s. This is somewhat surprising since they were known and recognised much earlier. They were already mentioned as *lamellae perforatae* or *tabellae plumbeae* in the venerable *Corpus Inscriptionum Latinarum* (CIL III 11883; CIL XI 6722, 1–12; CIL XIII 10029, 325; Pais 1888, n. 1090). The Siscia tags were published at the beginning of the 20th century, albeit in summarised form (Brunšmid 1901, 124–125). It was only in 1956 that Mócsy published the article on lead tags from Siscia in the collections of the National Museum in Budapest (Mócsy 1956, 97–104). Although his article cannot be considered as a thorough analysis, the Hungarian scholar deserves praise as the first to delve into the subject. In 1963, Egger published an important article on the finds of lead tags in Raetia (Egger 1961–63, 185–197), the first publication discussing this type of material in detail. Egger tackled this subject again several years later in an article about the lead tags discovered in Magdalensberg (Egger 1967, 195–210). His interpretations and careful conclusions are still pertinent today and there is no doubt that Egger pioneered the scholarly study of Roman lead tags. In the following years, other scholars began publishing similar tags (Moosham: Weber 1968–1971, 229–234; Usk: Tomlin and Hassall 1975, 291–293;

Concordia: Solin 1977, 145–164). At the 7th International Congress of Greek and Roman Epigraphy held in Constantza in 1977, Weber emphasised the importance of these tags (Weber 1979, 489–490) and indeed, during the 1980s, publications of tags became more common (Carnuntum: Weber 1981, 29–31; Trier: Schwinden 1983, 20–26; 1985, 121–137; Oberwinterthur: Frei-Stolba 1984, 127–138; 1985, 65–70; Italy: Marengo 1989, 35–63). The analysis of tags provides an important insight into their use in everyday life or, more precisely, their use in the commercial and industrial life of the Roman world.

Since the late 1980s, publications of Roman lead tags have appeared on a regular basis and the corpus of finds keeps growing. Among these publications, one has to mention in particular the book by Römer-Martijnse devoted to the tags from Kalsdorf, still the only monograph dealing with inscribed lead tags (Römer-Martijnse 1990; Susini 1990, 262–264; Schwinden 1992, 465–475). Römer-Martijnse has continued her research in this field and later published an important article devoted to the collection of tags from Forggensee bei Dietringen (Römer-Martijnse 1996–97, 5–48). Among the articles published during the last 15 or so years, one should certainly mention an excellent overview of the subject by Paci (Paci 1995, 29–40), the article of Feugère presenting the state of research in France (Feugère 1993, 301–305), as well as publications concerning some finds from Germany, Italy, Austria and France (Weiss 1991, 211–220; Schwinden 1993, 215–222; 1994, 25–32; Bassi 1996, 207–216; Bizzarini 2005, 121–135; Buchi and Buonopane 2005, 43–51; Wedenig 2009, 104–112; Jacques and Hoët-Cauwenberghe 2010, 295–317).

Together with the Siscia collection (which in its size surpasses by far all the other analogous collections in Europe), there is now a rather substantial corpus of published inscribed lead tags at our disposal, which allows us to more accurately define their possible uses in Roman everyday life.

Since lead is a highly suitable material for making seals and tags and, most importantly, can be used as a writing substrate, it is hardly surprising that it was used for all kinds of activities necessitating relatively durable written documents (for the use of lead in antiquity, see Boulakia 1972, 143–144; Römer-Martijnse 1991b, 46–47). Nevertheless, one has to distinguish the tags which concern us from more or less similar lead tags used for other purposes (Prou and Rostovtzev 1900; Rostovtzeff 1903; Lequément 1975, 667–680; Barrauol and Gourdiol 1982, 84, 90, fig. 3; Turcan 1987, 13–49, 51–163).

The tags from Siscia, together with other similarly inscribed lead tags belong to the category of artefacts which are known as *étiquettes commerciales* (Božič and Feugère 2004, 27; the equivalent German term is *Warenetiketten*), or commercial tags. As already mentioned, these objects are rectangular plates of lead, whose size varies only slightly, usually 30–40 mm long and 15–25 mm wide, always pierced with at least one circular hole. Through these holes, the tags could be attached with a cord or a metal wire to the merchandise (see an example of the metal wire in Frei-Stolba 1984, 133, no. 15). They all have an incised inscription on at least one side, but often both sides carry an inscription. The palimpsests are actually quite common since many tags had been reused several times and thus carry several different inscriptions, the most recent inscription erasing most of the older ones. The contents of the inscriptions are diverse, but usually these consist of the product name, mostly in an abbreviated form, weights or quantities as well as the

price and, sometimes, the task to be executed. Very often, personal names are also mentioned on such tags, but the definition of the exact role or function of these individuals is not immediately obvious: they could have been clients, but also managers of the producing or trading facilities involved, or owners, of the goods, perhaps even slaves in charge of the merchandise (for different opinions see Frei-Stolba 1984, 127; Römer-Martijnse 1990, 9–10; Schwinden 1992, 465–466; Paci 1995, 31–32; Reuter and Scholz 2004, 55; Bizzarini 2005, 122).

Thanks to the inscriptions, we can classify these tags into several categories, according to their uses. Since they were supposed to be attached to bags, bundles, receptacles or crates of goods, they would have been of great use in many different kinds of commercial or industrial activities, but they could have also been used by individuals, especially for labelling personal belongings and luggage. Their use in a military context could have a more formal character since they were most likely used to label not only personal gear but also equipment belonging to a unit.

Despite some uncertainties, most of the tags found in the Roman provinces can be linked with some confidence to specific trades or commercial activities. Considering the current state of research, we can say that such inscribed tags could have been used in many different activities such as the grocery trade and commerce (e.g. for *liquamen*: TLL, Vol. VII.2, 1474–1475 s.v. *liquamen*, OLD, 1034 s.v. *liquamen*, Krier 1991, 11; perhaps for a bag containing myrtle berries: Feugère 1993, 301–302; for asparagus: Schwinden 1994, 25–32; for beef: Scholz 2005, 246; Reuter and Scholz 2004, 60, Abb. 90); cosmetics (e.g. myrrh, or rather some kind of myrrh-based ointment or unguent: Solin 1977, 155, 158–159; some kind of nard-perfumed oil: Solin 1977, 156–157; cedar oil-based unguents or pharmaceutical products: Marengo 1989, 41–43; Paci 1995, 33–36); kitchenware (drinking vessels: Weber 1981, 29–31); and the textile industry, including trade and production, as well as cloth dyeing and cleaning.

Tags with inscriptions mentioning prices, weights or numbers but with no indication whatsoever of the nature of the merchandise itself are not uncommon finds either (Frei-Stolba 1984, 130, no. 7 and 133, no. 17; Marengo 1989, 39–40; Römer-Martijnse 1990, 225; Schwinden 1993, 217–222; Bassi 1996, 210; Römer-Martijnse 1996–97, 27; Radman-Livaja 2010, cat. 24.01–24.48, 25.01–25.34). They were certainly used for commercial purposes and they must have been attached to bales, crates, bags or receptacles but it is almost impossible to speculate on the exact type of trade. Some of the tags found in Sicily could have been attached to bags containing currency, since the inscriptions mention only sums of money but it could also simply be the price of the merchandise (Manganaro 1989, 193–194).

Tags used in the Textile Industry

Considering the contents of the inscriptions, there is no doubt that lead tags were used in different types of trade, but their use seems to have been particularly common in the textile trade and industry. Most of the known tags found on many different sites across the Roman Empire carry inscriptions mentioning clothes, wool as well as names of colours related to the dyeing industry. This is notably the case with the large collections of tags from Feltre, Forggensee bei Dietringen, Kalsdorf and Siscia. The authors of the first publications had already noticed the connection of these tags to the textile industry (e.g. for labelling the wool-bales:

Mócsy 1956, 103–104; for using them in the cloth trade: Egger 1961–63, 186–196 and Weber 1968–1971, 229–234). According to Egger, the individuals mentioned on the tags would have been manufacturers, or more precisely slave tailors, and their clients would have been soldiers (Egger 1961–63, 193–196). There is no doubt that these tags were used in the textile industry, but I am not convinced that the clients were necessarily soldiers. It is not an unsound assumption but one has to admit that absolutely nothing in these inscriptions points to the army. In his article on Magdalensberg tags, Egger elaborated his theory about the possible use of such tags in more detail. Although tailors (*excisor*, *sutor*) are mentioned, or, more precisely, their salary is mentioned in the inscriptions of the Magdalensberg tags, these individuals are never explicitly named.³ According to Egger, these anonymous tailors were simply charged with the task of mending used clothes after their cleaning at the fuller's shop or sewing new garments after the fabrics had been treated by fullers. The connection between the tags and fullers' work seems like an appropriate hypothesis to me, but, in his article, Egger mentions it without any detailed explanation. Although he describes in detail his vision of the professional relationship which could have existed between the tailors and menders on one side and fullers on the other, and suggests the kind of clients involved in that deal (mainly soldiers), he is rather vague in his conclusions on the supposed role played by the tags in this type of trade (Egger 1967, 206–209). Accordingly, *Ategenta Cattonis*, the person named on the tag from Moosham was considered as a slave in charge of the order mentioned on the other side, i.e. the manufacture of three mantles (*m(antella) III*; Weber 1968–1971, 229–234). The inscription on this tag has many analogies among the tags from Siscia, where the abbreviation *M* followed by numbers is very frequent.

Another argument in favour of the textile trade hypothesis is the presence of the abbreviation *COC* (or perhaps *COCC*) appearing under the abbreviation *M III* (cf. Römer-Martijnse 1990, 217). It is not certain whether there is a connection between these two abbreviations considering the deteriorated state of the tag, however, it must be pointed out that the abbreviation *COC* has been seen elsewhere as well, including on the tags from Siscia. It is very likely an abbreviation for a colour adjective, *coccineus* or *coccinus* (*TLL*, Vol. III, 1392–1393, s.v. *coccineus*, *coccinus*; *OLD*, 341, s.v. *coccineus*, *coccinus*; André 1949, 116–117; Egger 1967, 198; Radman-Livaja 2010, 79), meaning purple, or a technical term used in the jargon of dyers, perhaps a verb like *cociliare*. This word in Vulgar Latin is probably derived from a verb like *conchyliare* or rather *conchylii colore tingere*, which would mean “to dye in red” (*TLL*, Vol. IV, 30, s.v. *conchylium*; *OLD* 386, s.v. *conchylium*; Römer-Martijnse 1991a, 113). Furthermore, some of the tags from Concordia have inscriptions with the abbreviation *VEL* which could be related to wool (*vellus* or *vellera*) or textile products (*velum*; Solin 1977, 154, 156–157).

The tags from Oberwinterthur are very difficult to read and interpret, but it seems quite likely that at least some of them were used in the textile trade since one can see the abbreviation *M* followed by numbers on them (Frei-Stolba 1984, 128–133). The abbreviation *VII N II S* appearing on the tag no. 11 could be interpreted as *ve(lum) n(ummos) duos s(emissem)*. A tag from Carnuntum carries the abbreviations *CAS* and *VELV* which could be interpreted as garments (Römer-Martijnse 1987, 119–122). The first abbreviation could be read as *casula*, a kind of hooded mantle. This abbreviation is also seen on a tag from Virunum (Weber

1983, 62; *TLL*, Vol. III, 572–573, s.v. *casula*; Römer-Martijnse 1990, 217), while the other could be related to the word *velum* (*OLD* 2024, s.v. *velum*). This term covers several different textile products, such as sail, sheet, curtain or any woven cloth. This last term is perhaps the most likely meaning of this abbreviation in this particular case: according to Römer-Martijnse, the weight of six pounds mentioned in the inscription refers to the cloth (*velum*) needed for the fabrication of a mantle (*casula*). It is interesting to note that Römer-Martijnse does not reiterate this quite credible hypothesis in an article published few years later, where she simply states that it could have been a large scarf (Römer-Martijnse 1991a, 113). This is not impossible but in this case, since the inscriptions in these two lines seem to be contemporaneous, it would mean that this tag is related to two different kinds of garment, i.e. four mantles and one scarf.

The tags from Kalsdorf were also used in the textile industry, or more precisely, in the fullers' workshop (Römer-Martijnse 1990, 216–219; Schwinden 1992, 470, 475). Interestingly, many abbreviations found on tags from this second largest collection (after Siscia) do not have analogies elsewhere. Besides abbreviations like *CAS*, *PVR*, *M* or *P*, which are also common in Siscia, others such as *RUC*, *LEVO*, *PAS*, *MOR*, *AMAR* and *GRU* are far more difficult to understand (Römer-Martijnse 1989, 171; 1990, 216–219; *PAS* is known from Arras as well: Jacques and Hoët-Cauwenberghe 2010, 314–315).

An important argument in favour of the hypothesis that these tags were used in a fuller's workshop (see Flohr in this volume) is certainly the presence of the word *fullo* which appears on 9 tags, as well as the word *sulp(h)ur* appearing on one tag. Although having no doubts about their use by fullers, Römer-Martijnse neither gives further hints about the possible role played by these tags nor expresses her opinion on the identity of individuals mentioned on the tags. In a more thorough onomastic analysis of the Kalsdorf tags, Alföldy writes that the persons whose names appear in the nominative would have been the producers or perhaps the owners of the textile products; those whose names are in the genitive would have most likely been the owners of the merchandise; while the few individuals with names in dative would have been the clients to whom the merchandise was to be delivered (Alföldy 1993, 16). His theory has the merit of simplicity and is quite logical, though rather vague. Those individuals mentioned on the tags could have been either the employees of a shop or the clients, depending on the declension used in the inscription, but he does not specify the precise reason why their names were written on the tags. This is hardly surprising considering the lack of information in ancient sources and the scarcity of analogies, and one can understand why the researchers preferred not to speculate further without serious supporting evidence.

Römer-Martijnse published another important collection of inscribed lead tags from Forggensee bei Dietringen, which were used in the textile industry (Römer-Martijnse 1996–97, 5–48). Personal names appear on approximately 30 of these tags and they most likely belonged to *peregrini* of local origin. With very few exceptions, all of these names are different and the inscriptions presumably refer to a relatively high number of different individuals. It is almost certain that the tags are linked to the work of tailors, fullers and dyers, but Römer-Martijnse correctly presumes that those professionals are not named in the inscriptions. If the craftspeople were supposed to be mentioned on the tags, one would expect to see

some recurring names (even more so since the tags were discovered in what must have been a rather small community), but this is not the case. Those persons were, in all likelihood, clients who ordered the merchandise or asked for a service like cleaning, for example (Römer-Martijnse 1996–97, 20–21, 23).

Another important collection of inscribed lead tags was found in Feltre and they also seem to have been related to the textile industry (Buchi and Buonopane 2005, 43–51, with the corresponding bibliography). Although discovered at the end of the 1980s and since mentioned in several publications, these tags still await a thorough analysis. Nevertheless, the available information casts no doubt on their intended use: besides personal names, the inscriptions mention many abbreviated colour adjectives such as *balan(atus)*, *caeru(leus)*, *meru(leus)*, *(h)aema(tinus)* and perhaps also *topas(us)* or *topasi(us)* – a *hapax* which could designate a greenish-blue shade – as well as the generic term *color*. Other abbreviations also appear on these tags: the usual *M* and *P*, as well as the letter *V* (could it be related to the more common abbreviation *VEL*, or is it the word *vestis*, as suggested by Buchi and Buonopane 2005?), but also less common abbreviations like *D* or *DD* (perhaps even *DI*, unless it is simply the letter *D* followed by the number *I*). In their final article about the tags from Feltre, albeit admitting that it is not easy to determine whether the individuals mentioned on the tags were textile industry professionals or simply clients, Buchi and Buonopane proposed an interesting hypothesis, that these tags could have been used to recover garments left at the fuller's or dyer's shops, although they do not elaborate on it in more details (Buchi and Buonopane 2005, 43 and 48).

In this aspect, the tags from Fréjus are particularly interesting, since they have been found in a dyer's workshop. They are currently being studied by Bats, but a preliminary overview has been published in the report on the “Espace Mangin” excavations (Pasqualini et al. 2005–06, 318–319). There is almost no doubt that the building where they were discovered was an *officina tinctoria* and the inscriptions on the tags do confirm the hypothesis that they were used in the textile industry: besides personal names, weights and prices, names of products are also mentioned, such as, for example, *cuculla* or *segestria*.

Tags from Siscia and Their Possible Use

The above survey of the current state of research of the inscribed Roman lead tags is necessarily succinct, but it provides an overview of the possible uses of such objects. Obviously, they could have been used in a rather large spectrum of commercial and industrial activities, but it would seem that their use was especially common in the textile trade. This hypothesis is also confirmed by the tags from Siscia.

Their inscriptions generally follow the same model: inscribed on one side are personal names, *duo nomina* (far more rarely *tria nomina*), as well as single names, often followed by a patronymic that can be read. It would thus seem that both citizens and *peregrini* are mentioned on these tags, and, in some cases, even slaves. It is noteworthy that there is no significant disproportion between males and females among the almost 900 individuals mentioned on these tags. The males are more numerous, but females are nevertheless mentioned on over 40% of the tags (Radman-Livaja 2010, 532–540; 2011, 191). The reverse side of the tag usually carries an inscription mentioning the merchandise, most of the time in an

abbreviated form, as well as a price and quite often an indication of quantity or weight (Radman-Livaja 2010, 69–141). Those inscriptions are always written in capital letters or the older Roman cursive, sometimes even in a mixture of both, but not a single tag seems to be inscribed in the new Roman cursive, a detail which is of importance as far as the dating is concerned (Radman-Livaja 2010, 53–68).

Despite the reading of the personal names being quite dubious due to several factors, primarily the poor state of preservation of some tags and the mistakes of the scribe, it is usually far less subject to doubt than the interpretation of the abbreviations. Fortunately, the words appearing on the tags are not always abbreviated, which is of great help when attempting to correctly interpret at least some of the abbreviations.

There are many different abbreviations on the tags, and, although various commercial industrial activities could be in play, there is no doubt that most of them are linked to the wool trade and textile industry. Words like *LANA*, *PAN(N)UM*, *TVNICA*, *SAGVM*, *P(A) ENVLA*, *PAL(L)A*, *PALLIOLUM*, *LODIX*, *BANATA* and *ABOLLA* appear more or less regularly without being abbreviated and thus the interpretation of common abbreviations like *L*, *LA*, *LAN*, *PAN*, *T*, *SAG*, *PAENV*, *PAL*, *LO*, *LOD*, *LODI*, *BANA*, *AB* is quite certain.

These words, abbreviated or not, rarely appear alone in the inscriptions, since they are usually followed by other abbreviations which mostly seem to refer to the dimensions and colours of the textile products. Adjectives of colour are very common and a variety of shades appear in the inscriptions: *caeruleus*, *caesius*, *callainus*, *candidus*, *coccineus*, *ferrugineus*, *galbinus*, *gilvus*, *haematinus*, *myrteolus*, *piperinus*, *pullus*, *purpureus*, as well as some terms which are likely to be related to the colour of the fabrics and garments like *corticeus*, *pavoninus* or *pictus*.

The prices on these tags are a major argument when one considers these lead labels as commercial tags. The price, whether indicating the value of the goods or the cost of a given service like cleaning, fulling or dyeing, must have been crucial information on the tags since it appears on most of them. In any case, there is no doubt that most, if not all, of the tags from Siscia in the collections of the Zagreb Archaeological Museum were used in the trade and production activities of textile professionals. Yet, while their use in the textile industry seems certain, their exact role in it has yet to be determined. Evidently, they had to be attached to the merchandise, but to what aim? As summarised above, most of the researchers who have studied such tags remained quite vague in their conclusions, stating only that they were used in the textile trade, without going into any specific details.

Since different types of clothes and prices are undoubtedly mentioned on numerous tags, one must certainly envisage their role in this type of commerce. It is widely accepted that the urban population of the Roman Empire, and probably a large fraction of the rural population as well did not make their own garments, but instead bought them and that even the indigent people could afford some clothes (Jones 1960, 184; Young 2000, 215; Carrié 2004, 25). Since the price seems to have been one of the most important items of information on the tags, does this signify that the tags were attached to garments made for sale? In my opinion, this would be a rather anachronistic explanation. Nowadays, it is perfectly common to see price tags on every product, at least in the Western world, but it was certainly not a common practice in the ancient world (nor, indeed, in the Medieval or pre-

industrial periods). Obviously, stating prices on a signboard would not be unusual for a Roman merchant, but one can hardly imagine a Roman trader bothering to inscribe prices on hundreds of small lead tags meant to be attached to the merchandise. Actually, since most prices could probably be bargained and were therefore not definitive, the effort of labelling the merchandise would be even more futile. Even if this were the case, why would one need to note personal names on tags?

We will return to the role of individuals named on the tags, but for the time being, let us presume that most of them were clients. If this were the case, why are their names mentioned in the inscriptions? Was the merchandise sent to clients living far away from production facilities? In that case, one would easily understand why the name of the recipient had to be mentioned. The idea is tempting: after all, Siscia was not only a large urban centre, but also an important crossroads as well as a big fluvial harbour, and exporting goods produced in that town presented no difficulties. Nevertheless, although the export of textile products from Siscia, even if only on the regional level, does not seem unsound, it is difficult to believe that garments were sent to clients living outside the town on an individual basis. The quantities mentioned on the tags are simply too small, the prices are too low and it would thus seem that the clients could not have been wholesalers. For example, inscriptions on three of the Siscia tags contain the abbreviation *POND*, obviously (*libra*) *pond(o)*, and the numbers which follow this abbreviation are respectively 2, 6 and 17 (Radman-Livaja 2010, cat. 04.08; 19.56; 06.06). We can presume that the abbreviation *P*, extremely common on Siscia tags, in many cases represents the same word (Radman-Livaja 2010, 97–98). The letter *P* is also usually followed by small numbers (between 1 and 12, with some uncertain cases where the largest number could be 18, although they rarely exceed 4). Since a Roman pound weighs 324 g, it is obvious that in most cases the weight of the merchandise did not exceed 5 kg, and was usually less than 2 kg. Most prices on the tags from Siscia are less than 3 denarii (in fact, almost one-third of the prices are even less than 1 denarius), only 15% of the prices are more than 4 denarii, and prices exceeding 7 denarii are extremely rare.

The selling, sending and transporting, sometimes across vast distances, of wool bales or larger quantities of garments to wholesalers or even retailers was certainly not uncommon in the Roman Empire. It is well known from literary sources that the army ordered clothes from production facilities situated far away from garrisons (Fink 1958, 102–116; Jones 1960, 186–187; *RMR* 63, Fink 1971, 225 – Grecia has been proposed as an alternative reading, Campbell 1994, 114–116, no. 183; Davies 1974, 316; *BGU* 1564 = *SP* 395: the quantity is not very impressive but nevertheless remains larger than the quantities mentioned on Siscia tags; Campbell 1994, 144–145, no. 239; Wild 2002, 31–32; Dross-Krüpe 2011, 13–18). Good quality wool and garments were also commonly sold far away from their centres of production and there is no doubt that the textile industry of some towns or even whole regions primarily produced items for export (Frank 1937, 72–79; Loane 1938, 33–37, 128–133; Jones 1960, 183–192; Frayn 1984, 162–172; Greene 1986, 17–44; van Minnen 1986, 88–95; Bender 1989, 108–154; Deniaux 1995, 195–206; Laurence 1998, 129–148; Paterson 1998, 149–167; Wild 1999, 29–37; Greene 2000, 752–754; Harris 2000, 710–740; Wild 2000, 209–213; Vicari 2001, particularly 70–73, 86–91; Wild 2002, 27–32; Carrié 2004, 27–35; Adams 2007, 3–

16, 220–291; van Tilburg 2007, 68–76 ; cf. also *The Cambridge Economic History of the Greco-Roman World*, particularly Kehoe 2008, 543–569; Morley 2008, 570–591; Jongman 2008, 592–618). The transportation of large bales containing textile products is well documented on several monuments and it could be claimed that garments, fabrics and wool were usually packed and transported that way. According to these representations, these bales, either transported on ships, in wagons or on pack mules, were heavy and necessitated several men to handle them (Schwinden 1989, 302–304; Roche-Bernard 1993, 137; Larsson Lovén 2000, 237–238; Young 2000, 227). It is perfectly plausible that lead tags indicating the weight and the value of the merchandise as well as the names of the owners or recipients could have been used to label such bales or larger bags⁴, but tags from Siscia are unlikely to have been destined for such a use. Indeed, the weights and the quantities indicated on the tags certainly do not correspond to large bales but rather to packs containing only few or even just one garment or piece of cloth. When indicated, the weight of the wool seems barely sufficient to constitute one or two garments, rarely more. The weight and value of the merchandise mentioned on most tags are generally very low, and it would thus seem that it was not packed in large bales or big receptacles. No traces of a large scale trade or production are evident.

As far as Mócsy's theory is concerned, I find it unlikely that these tags were used in the way suggested by him. There is no doubt that wool is mentioned on some of the tags he published (as well as on some of the tags in the Zagreb collection), and his theory seemed therefore quite pertinent, even more so since he had at his disposal only a small sample. It is not inconceivable that wool from the neighbouring region was sent to Siscia and processed there, but I doubt that the lead tags in the Budapest and Zagreb collections had anything to do with this trade (if it did take place), unless we assume that the wool was packed in bags weighing 1 to 2 kg on average, or even less. What kind of trade was it then? Did people order garments which were then delivered to their homes? This is perhaps not impossible, yet why bother labelling the merchandise that an employee could deliver by foot in less than half an hour to any inhabitant of Siscia? Would it not be easier to simply ask the slave or the employee in charge to take the bag or the garment to, let us say, *Antonius Sido* or *Dasius*, son of *Lecanus* (Radman-Livaja 2010, cat. 08.32, 22.07), and inform or remind him where this person lived? The use of lead tags would have been rather superfluous in that case. Were those items supposed to be delivered to clients living outside of Siscia? Their use would have certainly had more sense if the merchandise had to be sent to clients not living in the city but is this hypothesis realistic? Sending a tunic, two cloaks or 5–6 pounds of wool costing only a small amount of money to a client living relatively far away from the production facility or the trading post seems rather like a concept from our time and hardly compatible to the trading habits and ways of the ancient world, not to mention that it could not have been a very profitable kind of trade. Nevertheless, these tags really seem to bear the names of clients. If the merchandise was not sent to them, why were their names inscribed on the tags?

We might presume that some of the tags could have been used as a reminder, a memo for tailors who worked for textile wholesalers or made garments for individual clients in Siscia. Attaching a label with all the important data to a piece of cloth entrusted by a client in order to make a garment could have been useful,

but was this really the simplest way for a tailor to note his clients' wishes and keep track of his orders? It is perhaps not impossible, even more so, since tailors are mentioned on the tags from Magdalensberg, but one must point out the suggestion put forward by Egger: according to him, the tailors mended the used clothes washed by the fullers or made new garments from fabrics processed by fullers. Although he did not elaborate on his idea, he had no doubts that these tags were related to the work of fullers (Egger 1967, 206–209). His hypothesis was accepted by other researchers (Römer-Martijnse 1996–97, 20–21, 23; Vicari 2001, 62), and some further claimed that such tags could have been used to retrieve garments left at the fuller's or dyer's workshop (Buchi and Buonopane 2005, 43, 48).

As far as tags from Siscia are concerned, I would also be in favour of the hypothesis that the tags have been destined to be attached to garments or fabrics left at the fuller's workshop in order to be cleaned, or at the dyer's workshop in order to be refurbished, i.e. dyed. Although different aspects of the Roman fullers' and dyers' work as well as the procedures for dyeing fabrics and laundering garments are well documented by literary sources and archaeological research,⁵ some technological and further practical details are beyond our understanding. For instance, how did a fuller or dyer manage to return his wool, cloth or garment to a client? Attaching a label with an inscription stating the name of the client, the required service and the cost of the operation seems a rather good way not to lose the property of his clients. One would expect the use of such tags to be more common among fullers, as dyers mostly worked on carded wool before spinning and weaving, since yarn and fabric absorb dyes less easily (Blümner 1912, 229; Forbes 1956, 131–134; Wipszycka 1965, 145–146; Wild 1970, 80; Moeller 1976, 13; Roche-Bernard 1993, 103–104). However, many tags from Siscia indicate the colour of the garments mentioned in the inscriptions and we might assume that this detail must have been important. We thus cannot exclude the possibility that the tags whose inscriptions specify the colours of the garments were destined for dyers in charge of refurbishing discoloured used clothes, i.e. the *offectores* (Blümner 1912, 228; Forbes 1956, 141; Moeller 1973, 368–369; Moeller 1976, 14; Uscatescu 1994, 93). Indeed, this information would have been useful to fullers as well, if only to help them quickly identify clothes and garments before returning them to the clients. In the case of tags bearing inscriptions with the word *LANA* (or the abbreviations *LAN* and *LA*), we can assume that they were attached to bags of wool to be dyed, given to dyers by individual clients. The same assumption seems valid for tags bearing the abbreviation *VEL*, if we accept the possibility that the word in question was *vellus*.⁶

At least three tags from Siscia bear a highly significant item of information, *tesseram perdidit* (Radman-Livaja 2010, cat. 01.72, 01.73, 01.74; 2011, 193–194). It would thus seem that, in those particular cases, the employees of a *fullonica* or an *officina tinctoria* had no idea to whom a given garment or cloth belonged or what kind of service was to be executed, precisely because the little tag containing all the necessary information – *tessera* as they called it – was lost. While they waited for the owner who could clarify the situation and recognise his goods, the piece of garment or cloth in question was most likely put aside with this provisional label. Just as with any other hypothesis, this one remains to be proved, but it seems to me that most tags from Siscia do conform to the model which corresponds rather well to the proposed interpretation (Radman-Livaja 2010, 119–

141, 517–522; 2011, 191–194).

As objects designed to be attached to any kind of container, bag, bale or crate, the tags evidently played a useful role in all kinds of commercial and industrial activities, as I already suggested (Radman-Livaja 2010; 2011), but as far as tags explicitly mentioning fabrics or garments are concerned, I believe they were mostly used by fullers and dyers (more likely *offectores*) as property labels of their clients and reminders of the services to be done. Unquestionably, the meaning of certain abbreviations remains obscure, but I do not think that their use in the textile industry can be doubted. If fullers and dyers seem to be the most likely users of such tags, we cannot exclude the possibility that other textile craftspeople participated in this trade. I mostly refer to Egger's hypothesis about menders charged with the repairing of used garments after cleaning or making new garments from fabrics processed by fullers (for mended cloaks, see e.g. Granger-Taylor 2008, 6–16). His theory seems quite pertinent to me and takes into account a possible professional relationship between fullers and tailors or menders. For example, a client could ask a fuller to process a fabric purchased from a weaver, and, if that fuller had professional links with tailors or menders, the client could ask for the cloth to be made into a garment or mended after fulling, and all of these services could have been part of the same transaction. Although it is hard to conjecture how the cooperation between fullers and tailors could have worked, this theory must be seriously considered, both because of the Magdalensberg tags and of the abbreviation *SAR* (perhaps to be interpreted as the verb *sarcire*) which is not uncommon on Siscia tags (Radman-Livaja 2010, 103–104).

However, it must be pointed out that Roman garments, particularly those used during the Principate, can hardly be described as tailored attire. It was simply an assemblage of woven elements and sewing was limited to putting together the few pieces of cloth of rather regular form.⁷ This kind of work did not require highly developed skills, compared to weavers or, perhaps in a lesser measure, to fullers and dyers. Making a tunic was a very simple operation, a *paenula* required a little bit more skill and a *sagum* could be made by any tailor, it certainly did not require an accomplished craftsperson. Therefore, Carrié may be correct when he doubts the existence of specialised tailors in the ancient Roman world, at least in the modern sense (Carrié 2004, 35). The weavers' craft was not limited to weaving, since they were perfectly able to make garments themselves – we know they were doing this on a regular basis (Wipszycka 1965, 74–78) – and we can rightly be suspicious about the existence of independent craftspeople solely specialised in the production of garments made from cloth processed by weavers, dyers and fullers (although it is not entirely impossible, cf. Wipszycka 1965, 121–125). We should probably not envisage a very strict separation between different categories of textile craftspeople, since it is not unlikely that weavers, dyers and fullers could have worked together. Obviously, this does not mean that they shared the same facilities or that they worked in the same undertaking, but it is quite conceivable that they could cooperate to fulfil an order together.

In theory, a client could have brought the wool to the dyer, dyeing was followed by spinning, after which the yarn was given to the weaver who was told what kind of garment the client wished to acquire. The weaver would then make one or more pieces of cloth corresponding to the specifications. The client would then take it to a fuller's shop where the cloth was subjected to fulling and once the cloth was

cleaned and ready, the client would bring it back to the weaver or give it to a tailor in order to finally have the desired garment made. Thus, a client might have had to deal with at least three, perhaps four or even five different specialists, depending on whether each different phase of the work, most notably spinning and the final sewing was undertaken by another craftsperson. It was not necessarily a very complicated procedure, but we might also presume that a client could make a contract with a single craftsman who in turn would engage other partners, who would take charge of required tasks he was not familiar with, i.e. out of his field of expertise. Therefore, according to Egger's theory, a client could bring a cloth to a fuller for finishing and ask at the same time for a garment to be made out of this cloth. It is likely that the fuller was not personally involved in the making of the garment, but he could have had a partner or subcontractor, in this case a tailor or mender, perhaps a professional weaver, who could fulfil the order for the client.

Conclusion

There seems to be a great deal of evidence in favour of the hypothesis that lead tags were used by textile craftspeople as labels for wool, cloth and garments entrusted to the care of fullers and dyers. Since most inscriptions on the tags mention personal names, the identification of these individuals is definitely an important issue. The question has been raised in the title of this paper and although it had been tackled in the previous pages where I repeatedly suggested that they were most likely clients, it is now time to give a more in-depth answer, or at least attempt to do so. So, are these the names of recipients, i.e. clients, or the names of producers, i.e. the textile craftspeople? As pointed out above, the first hypothesis seems more credible since one would expect recurring names if these individuals were the producers. With merely a few exceptions, the persons named on the tags from Siscia – and there are almost 900 of them – bear different names. I would thus be more inclined to consider them as clients rather than people from the same professional circle (for the same opinion, see Römer-Martijnse 1996–97, 20–21, 23).

Obviously, since these tags can be dated to a rather large time frame, i.e. the 1st and 2nd century AD, perhaps even to the first decades of the 3rd century AD (Radman-Livaja 2010, 549–555), one might object that the persons named on the tags could have been workers living in different periods, but is this remark really valid? We should ask ourselves what would be the point of inscribing the names of menders, fullers and dyers in charge of the merchandise? After all, a patron could have simply noted that in his own books or registry. Indeed, tailors (*excisor*, *sutor*), or more precisely their salaries, are mentioned on the tags from Magdalensberg, but those craftspeople are never explicitly named.⁸ Nevertheless, it should be emphasised that the word *fullo* follows personal names on several tags from Kalsdorf (Römer-Martijnse 1990, cat. 5, 24, 29, 41, 46 (?), 70, 77, 86, 87 (?)) and Siscia (Radman-Livaja 2010, cat. 08.02, 10.05, 19.04, 26.94), so we might reasonably assume that these individuals were indeed fullers. This could be a strong argument in favour of the hypothesis that textile industry professionals were named on tags, but other professions are occasionally mentioned as well, and none of them is related to textile crafts. For instance, we find on Kalsdorf tags a harness-maker, a stonemason and perhaps also a locksmith (Römer-Martijnse 1990, 29–30, cat. 10, 44, cat. 20, 75–76. cat. 40).

As far as the tags from Siscia are concerned, besides fullers, we find mention of two tanners (Radman-Livaja 2010, cat. 02.09, 14.19), a herbalist (Radman-Livaja 2010, cat. 02.05), a female potter (Radman-Livaja 2010, cat. 21.37), a tailor or mender (Radman-Livaja 2010, cat. 01.74), two slaves (Radman-Livaja 2010, cat. 03.02, 23.26), several assistants whose exact role is not defined (Radman-Livaja 2010, cat. 02.26, 10.04, 13.24, 18.18, 19.112, 22.22; it should be pointed out nevertheless that it could have been a personal name in some cases), someone's colleague (Radman-Livaja 2010, cat. 02.14), as well as a veteran (Radman-Livaja 2010, cat. 23.46). We can presume that *Sencio* was a mender and not a shoemaker, just like the *sutores* in Magdalensberg, even more so since this tag carries the inscription *tes(s)er(am) p(e)rd(i)di(t ?)*. It would thus seem that *Sencio* was not a client, but the craftsman in charge of the merchandise and presumably also the culprit responsible for losing the *tessera* (Radman-Livaja 2010, cat. 01.74). Besides, *Sencio* is not the only individual mentioned in the inscriptions indicating the loss of the tag, which most likely contained all the relevant information about the order, i.e. the name of the client, the desired service as well as the cost of the transaction (Radman-Livaja 2010, cat. 01.72, 01.73, 01.74). We can assume that *Lecana* and *Lucia(?) Sabina* were, just like *Sencio*, textile professionals. It seems reasonable to write down the names of the persons in charge of the merchandise, when we miss all the other important data, but why would someone have to mention the names of fullers? What was the role of *Firmus*, *Ursio*, *Vicinus* and the anonymous fuller apparently mentioned in the still visible earlier inscription on one tag (unless the word *fullo* refers to *Titius?*). It is difficult to ascertain: *Ursio* is mentioned in an inscription together with the abbreviations *R C I*, which are quite difficult to understand; *Vicinus* is associated with the abbreviations *F. P. II*; while *Firminus*' name appears with the abbreviations *BAN PAVQ* and *CAS ...*; in the last case, the word *fullo* seems to be related to a badly scratched inscription with only few letters still legible (... *A . T II*). One must admit that there are no evident common features between these inscriptions. Nevertheless, we cannot exclude that, in each case, some of the abbreviations might be related to adjectives of colour: this is undoubtable as far as *pavo(ninus)* is concerned, and we could presume that the abbreviations *C* and *F* may stand for words like *caeruleus*, *caesius*, *callainus*, *candidus*, *coccineus*, *corticeus* or *ferrugineus*. A colour adjective could have preceded the abbreviation *t(unicae) duae* as well. The fullers, we are well aware, were not involved in dyeing but they could certainly use the services of dyers. It does not seem impossible to me that the fullers mentioned on the Siscia tags were, in those particular cases, simply the clients of dyers. They could have gone to the dyer's shops either for their own sake or on behalf of their clients, a matter of no importance as far as the dyer was concerned. It is thus not impossible that the mention of the profession was simply a distinctive indication in order not to mix up the different clients bearing the same name. Such a detail would certainly ease the identification of people with very common names, such as for example *Candidus lapidarius* in Kalsdorf (Römer-Martijnse 1990, 75–76 cat. 40) or *Valentinus (h)erbarius* and *Firmus fullo* in Siscia (Radman-Livaja 2010, cat. 02.05, 08.02).

We also find a *Sulpicius vet(eranus)*, presumably a veteran, a former legionary or auxiliary soldier, or perhaps a sailor (Radman-Livaja 2010, cat. 23.46). Why was this detail mentioned on the tag and what kind of importance could it have had? *Sulpicius* could have been a shop owner or a trader, just like many ex-soldiers who

started a business career after leaving the army (Wierschowski 1982, 40–45), but even if this were the case, why would someone have to indicate his veteran status? To satisfy the pride of an old soldier? He most likely did not write the inscription himself since he was probably a client, but the craftspeople who wrote it down certainly believed this information to be relevant. He probably did not care much about his client's military past but it was presumably a good way to distinguish him from another *Sulpicius*. Craftspeople and merchants, or in this particular case menders, fullers and dyers, often depended on regular clients who kept returning. We can assume that they knew each other quite well and, besides a purely shopkeeper-client relationship, a less formal relationship could have developed, based on the proximity which normally exists between people inhabiting the same neighbourhood, who are used to living alongside each other and who have no reason to be very scrupulous when addressing each other. Thus, when writing down a client's order, it was not always necessary to note his full name since everybody knew who was, for example *Sulpicius* the veteran, *Simplex* the tanner, or the Spaniard *Viriatius* (*Bardilus Viriatius*; Radman-Livaja 2010, cat. 23.46, 14.19, 19.21).

It would seem that, at times, some employees could not even remember the exact names of the clients, which would explain the odd inscriptions such as *Marci Valeri(i) collega*, *Gratianorum ancilla* or *fictiliaria* (Radman-Livaja 2010, cat. 02.14, 03.02, 21.37). As long as the fuller or dyer could recognise and return their belongings to the colleague of *Marcus Valerius*, the slave girl or the potter girl in question, the lack of their precise names on the tags was probably of no real importance. In any case, it must be pointed out that professions are only seldom (only on the 2% of the tags from Siscia) mentioned on tags, including textile crafts. It is therefore hard to claim that it was important information as far as this kind of inscription is concerned. We cannot exclude the possibility that at least some of the tags contained the names of textile professionals – it is actually, in my opinion, quite likely – but most of the individuals mentioned on tags must have been clients. Besides the persons whose names appear with the syntagm *tesseram perdiidi(t)*, we could also presume that textile craftspeople might have been mentioned on tags where different personal names appeared on the obverse and reverse sides of the same tag (sometimes, female and male names are incised on the same side). In those 50 odd cases, some might be indeed traces of older inscriptions and there would be consequently no link whatsoever between those individuals.

There are also cases when a gentilitial, *nomen gentile*, appears on one side and the cognomen on the other, which might lead us to believe that it is a single individual, i.e. a citizen. However, in many cases the inscriptions on both sides seem to be contemporaneous and since it is not very likely that we have two or sometimes even three clients ordering the same merchandise or asking for the same service, other solutions must be considered. An explanation might be given by the inscription on the tag, where the name *Ausus* appears on one side, while the sentence *Satulus sarcivi(t)* can be read on the other (Radman-Livaja 2010, cat. 01.67). The writing is identical and both inscriptions seem to be contemporaneous. In my opinion, *Ausus* could have been the client while *Satulus*, most probably a tailor, was charged with the order, i.e. he had to make or mend a garment. We can therefore assume that, in some cases, the tag could bear both the name of the

client and the name of a craftsperson who was supposed to take charge of a specific part of the work to be done. If Egger's theory is valid, such craftspeople could have been menders who were dealing with the clothes or garments after these had been processed by fullers or perhaps dyers. Since their job had in all probability to be done outside the fuller's or dyer's facilities, the appearance of their names on the tags would certainly have been useful. This hypothesis remains to be discussed, but I do not find it unlikely. I firmly believe that most individuals named on the Siscia tags were clients, but if some professionals are indeed mentioned on the tags – most often alongside clients – I would consider them as employees or collaborators whose names had to be noted, since they were expected to handle separate tasks which were probably not part of the usual working procedures, or did not correspond to the skills normally performed by the craftsperson who had taken the client's order. As with every other theory, this one remains to be confirmed or refuted by new discoveries, and I hope that we will not have to wait long for new finds of inscribed lead tags.

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1 Brunšmid 1901, 124–125; Mócsy 1956, 97–104; Šašel 1974, 729; Fitz 1980, 325; Frei-Stolba 1984, 134–135; Römer-Martijnse 1990, 232–233; Hoti 1992, 144; Feugère 1993, 304; Schwinden 1993, 216; Paci 1995, 33; Bassi 1996, 207, 216; Römer-Martijnse 1996–1997, 5; Koščević 2000, 96; Lovenjak 2005, 43; Radman-Livaja 2007, 153–159; Radman-Livaja 2011, 181–196.

2 Their absence from the archaeological record in the Eastern provinces and Africa is probably more due to the lack of research than anything else, an opinion which I share with Paci 1995, 29.

3 According to Egger, the individuals named on the tags would be the patrons whose names are not associated with the words *sutor* and *excisor*. Whatever their exact role and function might have been, it seems nevertheless certain that they were not the tailors and menders mentioned together with the price indications on the obverse of those tags; Egger 1967, 197–202, 206–208.

4 A recently published tag from Arras might precisely represent such a tag: besides a weight indication of 20 pounds (or 21?), it bears the word *VESTES* followed by an abbreviation interpreted as *C(oloniae) C(laudiae) A(rae) A(grippinensium)*, cf. Jacques and Hoët-Cauwenbergh 2010, 313–314.

5 For wool processing and spinning, cf. Forbes 1956: 2–12, 149–171; Wipszycka 1965, 26–37; Wild 1970, 4–10, 22–26, 31–40; Roche-Bernard 1993, 54–59, 66–72; Wild 2002, 2–5, 8–10; Gleba 2008, 72–75; for dyeing, cf. Blümner 1912, 225–259; Forbes 1956, 98–141; Wipszycka 1965, 145–156; Wild 1970, 79–82; Roche-Bernard 1993, 103–116; Wild 2002, 7–8; for weaving and weavers, cf. Blümner 1912, 135–170; Forbes 1956, 172–245; Wipszycka 1965, 47–128; Wild 1970, 41–58, 61–78; Roche-Bernard 1993, 77–102; Wild 2002, 10–12; for fulling, cf. Blümner 1912, 170–190; Forbes 1956, 81–94; Wipszycka 1965, 129–145; Roche-Bernard 1993, 117–124; de Ruyt 2001, 185–191. Besides the literature quoted above, see also Pernier 1906, 316–323; Loane 1938, 69–77; Johannesen 1954, 157–160; Pietrogrande 1976; Römer-Martijnse 1990, 235–263; Alfaro Giner 1994, 823–836; Uscatescu 1994; Croom 2000, 18–29; Vicari 2001, 1–8, 21–23; de Ruyt 2002, 49–53; Cardon 2003; Carrié 2004, 13–27; Flohr in this volume.

6 It should be pointed out that, as far as Siscia finds are concerned, it is precisely on the tags bearing the abbreviations *LAN*, *LA*, and *VEL*, that the largest weights are indicated; cf. Radman-Livaja 2010, 130–131.

7 It would nevertheless seem that some elaborate garments were actually not cut from a ready-

made piece of rectangular cloth, but woven to shape right on the loom, cf. Granger-Taylor 1982, 3–25. I would like to thank Judit Pásztókai-Szeőke for this suggestion.

⁸ According to Egger, the individuals named on these tags were the patrons (I rather believe they were clients), but their names are never associated with the words *sutor* and *excisor*. Whatever their role might have been, it seems quite certain they were not the menders mentioned with the prices on the obverse of the tags; Egger 1967, 197–202, 206–208.

6. Female Work and Identity in Roman Textile Production and Trade: A Methodological Discussion

Lena Larsson Lovén

Introduction

The aim of this chapter is to discuss the role of women in textile production and trade in Roman Italy. The work of women in general terms is not very clearly documented in the ancient sources and this chapter concerns how women's role in textile production is reflected in the sources – and furthermore, how this situation may be, or perhaps may not be, related to an ancient reality. Since there is no comprehensive source of information on the production of Roman textiles, a combination of sources must be used as a basis for any discussion of this kind. The following overview will primarily be based on epigraphic and iconographic evidence with the addition of some literary sources, the overall purpose being the examination of what various source genres can tell about women's role in the production and trade of textiles and how the sources relate to female identities.

If one turns to the literary sources, there are some episodes that mirror the scale of production and trade of Roman textiles. Livy provides some information which reflects the quantities of clothes produced and traded in mid-Republican times. For instance, there is a story about Tiberius Claudius Nero, praetor in Sardinia in 204 BC. He had a cargo of 1200 togas and 12,000 tunics sent to supply the Roman legions serving in North Africa under Scipio the Elder towards the end of the Second Punic War (Livy 29.36).¹ Already the amount of garments mentioned in this episode was vast, but only a couple of decades later, a much larger quantity of clothing was contracted for the Roman army in Macedonia. This we also know from Livy who relates another episode from 169 BC of the urban praetor C. Sulpicius who contracted a transportation of 6000 togas and 30,000 tunics to be sent from Rome for army supply in Macedonia (Livy 44.16). The figures in these two episodes give some insight into the demand for garments by the Roman army and also into the textile trade related to the army. The amount of garments required by the Roman army already in Republican times was impressive and raises questions about who produced and traded textiles in Roman society. The textile branch involved an extensive number of people as producers, traders and consumers throughout the vast empire and textile production formed a vital part of the Roman economy.

By tradition, cloth production was considered to be the work of women and this kind of work was supposed to take place in a domestic setting. There are a number

of well-known literary female characters who are presented as industrious housewives occupied with textile work in their homes. For instance, in the stories of women of early Rome such as Tanaquil (Plut. *Q.R.*30; Pliny *NH* 8.194) and of the legendary Lucretia (Livy 1.57.9; Ovid *Fast.* 2.741–43), textile work played an important part and these women served as long-standing female role models. Yet, how do such ideal women relate to the production of textiles? Did women take an active part in the large-scale production and trading of clothes and textiles which is reflected in the passages in Livy? Or was such large-scale production and trade mainly a male area of work?

Roman Cloth Production in the View of A. H. M. Jones

In 1960, the article “The Cloth Industry under the Roman Empire” by A. H. M. Jones was published. At the time of its publication, the question of Roman textile production was not a topic frequently discussed. Nowadays, the situation is different and, during the last 15 years, the importance of textiles has been highlighted from many different viewpoints.² However, over the 50 years that have passed since its publication, Jones’s work has become one of the standard titles in the field of Roman textile production and it is usually found in any bibliography of studies dealing with various aspects of Roman textiles. In his article, Jones deals with what he called the “cloth industry” in the Roman Empire and his point of departure does not seem promising due to the poor state of sources in most parts of the former Roman Empire.³ The exception to this is Roman Egypt with its papyri from the entire Roman period, while from the rest of the empire there are only “casual literary allusions and a rather meagre crop of inscriptions” (p. 183) that reflect textile production.

It is evident already from the beginning of Jones’s text that *men* are central in his study, as the obvious producers of textiles. At the very beginning of the article it is stated that “It is only in Egypt that we have any intimate knowledge of weavers, what kind of men they were and how they were organised” (Jones 1960, 183). Somewhat later in the article, however, Jones touched very briefly upon women’s involvement in textile production by using some of what he characterised as “casual literary allusions”. Among them is the occurrence of one of the standard virtues of the Roman matron, *lanificium*, and he also mentions the attempts by Augustus to revive ancient traditions by having the women of his family spin and weave (Jones 1960, 184).

The reader is left with the impression that, in Jones’s view, the task that occupied women was primarily spinning, the stage prior to weaving in the chain of textile production. Both women living in the countryside and those in towns spun and, in his view, spinning is characterised by having been “entirely unorganized” and it “was mainly done, as today [i.e. 1960] in the Nearer East, by women in their spare time” (Jones 1960, 190).

To sum up briefly, textile production in Jones’s view, or to use his terminology “the cloth industry”, in general played only a minor role in the economy of the Roman empire as a whole, and women’s role in the production of textiles appears to be of no particular significance. Household weaving was “of little economic importance” according to Jones (1960, 184). Women’s foremost task was spinning which was done in an “entirely unorganized” way and was done in their “spare time”. Weaving, on the other hand, is described as having been done by men and

regularly organised on a large scale. Thus, in general, women's work was performed on a small-scale basis and in an unorganised way, while men's work was organised and carried out primarily on a large scale.

The history of women was not on the agenda around 1960 when Jones's article on cloth production was published, and in that sense his study is typical of its time. Yet, if we are not content with how Jones presented, or rather neglected, the issue of women's role in textile production, how can we best approach questions concerning the involvement of Roman women in the economy of production in general and textile work in particular?

Women and Textile Work in Epigraphic Sources

In the 1970s, a new interest in women's history was kindled. The result of this is a plethora of studies dedicated to women of the past, which serve as sources for further studies. Thus, the situation today is very different from when Jones's article was published. Some of the studies that have appeared since the mid-1970s onwards are concerned with work in the Roman world, including textile production. Among the earliest of its kind are the studies by Susan Treggiari on the documentation of female jobs (Treggiari 1975; 1976; 1979). These studies are largely based on funerary inscriptions that include occupational titles. Treggiari's study on "Jobs for women" (1976) was concerned with inscriptions from the city of Rome that document the urban staff of wealthy aristocratic slave-owners, as well as the imperial family of the early empire. Among the inscriptions with job titles are a range that relate to textile production. They mirror the job organisation of a large household with a work hierarchy and also a specialisation in jobs both for men and women. Among the textile jobs documented in epigraphy, we find women commemorated, among others, as spinners (*quasillariae*), weavers (*textrices*), wool-weighers (*lanipendae*), and tailors (*vestifcae*). In addition to those involved in the stages of production in a strict sense, there were also those who patched and mended clothes and the clothes folders who were responsible for the wardrobe of the master or mistress. These occupations and some others will be discussed below.

Quasillaria

In epigraphy, the *quasillaria*, spinner, is an exclusively female job with no male counterpart. However, there are only a few epigraphic instances of *quasillariae* from the city of Rome and most of them come from the monument of the Statilii family – altogether eight instances commemorating slave women (*CIL* 6. 6339–6346; Treggiari 1976, 84). A few more scattered instances of *quasillariae* appear from Rome, but none from other towns in Italy (*CIL* 6. 9495, 9849a, 9850). Considering the continuous work of spinning wool, only a handful of inscriptions does not reflect accurately this type of work. The possible reasons for the scant evidence of spinners in general will be further discussed below.

Textrix/stamnaria

The stage after spinning was weaving, and, for this job, the epigraphic documentation is also very limited – although both men and women appear as weavers. A female weaver could be either a *textrix* or a *stamnaria*. Again, some of the inscriptions are from the monument of the Statili, one referring to a female and

two to male weavers (*CIL* 6. 6360–6362 and 6.33371). Nor in this case does the epigraphic documentation correspond accurately to the number of people, whether women or men, who would have worked as weavers.⁴

Vestifica/sarcinatrix

Other female textile jobs that appear in wealthy households were of those who made clothes such as the *sarcinatrices* and the *vestificae*. Finished cloth could be made into new garments by the *vestificae* found among the household staff of private employers (*CIL* 6.5206, 9744, 9980). However, this was not an exclusive female job, as male *vestificii* are also found among wealthy household staff (Treggiari 1976, 85; *CIL* 6.7476, 8544, 9979, 37724). The mending and patching of clothes already in use was done by *sarcinatrices* and also for this job title some men are found, although female workers predominate in this field (e.g. *CIL* 6.4029, 4434, 4468, 5357, 6349, 6350, 9038). Some of these women are found among the extensive household staff of the Statilii and of the empress Livia (*CIL* 6.3976–77; cf. Treggiari 1975). Although mending clothes may have been the essential task of a *sarcinatrix*, she could probably do some tailoring, too (Treggiari 1976, 84).

Lanipenda

A number of job titles relate to wool, *lana*, the major Roman textile fibre. One of these occupational titles is *lanipenda* who was literally a wool weigher, but in reality it was a person who may have been in charge of wool work in households where the entire operation was performed (*CIL* 6.9496–9498, 34273, 37721, *AE* 1969/70, 49; see also *CIL* 5.4350, 9.3157, 9.4350). It is unusual to find a woman in a position of manager or supervisor in any kind of job, but Treggiari has suggested that the reason for finding a woman in such a position in this case may have to do with the fact that the *lanipenda* was regarded as a deputy for the matron who would traditionally be in charge of the wool work, the work of *lanificium* (Treggiari 1976, 83).⁵ The supervisory function of a woman, however, seems to have been restricted to households outside the wealthiest families and the imperial circle, where instead men were in the position of *lanipendii* (*CIL* 6.3976–3977, 6300, 8870, 9495, 37755).⁶

If one moves outside the group of wealthy households in the city of Rome and looks at the inscriptions from the wider context of Roman Italy, the epigraphic evidence does not change radically but presents a somewhat more diverse range of occupations for women than among the wealthy household staff of Rome, and even more so for men.

Lanifica circulatrix

The idea of the Roman matron as *lanifica*, mentioned above, is a recurrent topic in literary sources and in epigraphy commemorating dutiful housewives.⁷ A *lanifica* also appears on a remarkable funerary stele from Aquileia, commemorating a woman named Trosia Hilaria. The stele was raised by the woman to herself and to her freed male and female ex-slaves. Trosia Hilaria was also a freedwoman, a *liberta*, and her occupational title was *lanifica circulatrix* (see Fig. 6.1).⁸ The style of writing points in the direction of a late Republican date for the stele. There is no image on the stele to help us with the meaning of this unique job title, but it is evident that the expression *lanifica*, in this case, was not used as the customary

praise of an industrious housewife but rather as a job title. Trosia Hilaria, the *lanifica circulatrix*, may have been a spinner/weaver who worked on a professional basis as a trader in different households in the region of Aquileia.

In addition to a number of *lanipendae* and the *lanifica circulatrix*, associations with *lana* appear in the occupational title of *lanarius*. This is quite frequent in inscriptions from Rome and central and northern Italy, but exclusively in the male form. This is one of several Roman job titles where the exact meaning of the occupation is not altogether clear, but various interpretations have been suggested, e.g. a “producer in wool” or “dealer in wool” (von Petrikovits 1981, 100), or, more recently, a catch-word for a “wool worker” (cf. *lanifica*; Dixon 2000–01, 9).⁹ Whatever the exact meaning this occupational title had, it is one of several that alludes to wool and also reflects the outstanding importance of this fibre in Roman textile production. However, *lana* is not the only textile fibre reflected in the occupational titles. Names of jobs related to other textile materials such as linen, *linum*, and silk, *serica*, are also found in inscriptions.

Linaria

There are some job titles related to linen, second in importance among the textile fibres used by the Romans. Job titles related to linen and linen products are, however, not quite as diverse as those related to wool. The connection between linen, *linum*, and a job title like *lin(te)arius* is obvious. There is an inscription from Milano which documents both a man and a woman with the occupational titles of *linarius* and *linaria* respectively (CIL 5.5923). The inscription was commissioned by the man, a *linarius* named Gaius Cassius Sopater. It commemorates not only the man himself but three of his freedwomen as well, all bearing the name Cassia. One of them, Cassia Domestica, was his wife and her occupation was also *linaria*. Artisans’ epitaphs including freedmen and/or freedwomen often indicate a working relation between them, sometimes even over multiple generations (Joshel 1992, 138). Cassius Sopater and Cassia Domestica may thus have worked together producing and/or selling linen, or cloth or clothing made of linen. It is a very rare phenomenon to find the same occupation both in the masculine and in the feminine, for both a man and a woman in the same inscription (Huttunen 1974, 48f; Treggiari 1976, 98; Dixon 2001b, 118).¹⁰ Sometimes, mixed sex groups appear in inscriptions where an occupational title is included, but then always in the masculine form.

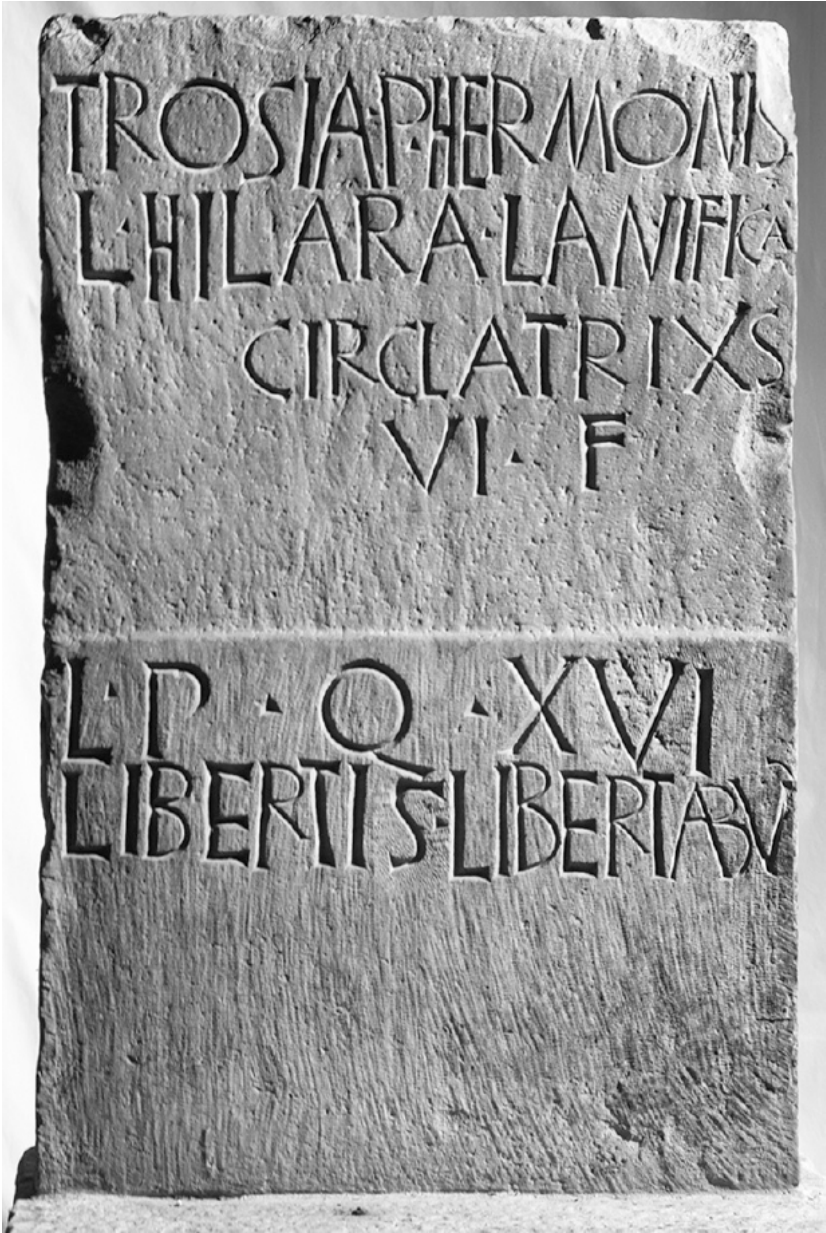


Fig. 6.1. Funerary stele of Trosia Hilaria who was lanifica circulatrx. Probably Late Republican, Museo Archeologico di Aquileia. (Photo: Museo Archeologico di Aquileia and Doz. Orlof Harl/ubierat.lupa, ID 13410).

Sericaria

Yet another textile material was silk, *serica*, although it was used to a much more

limited extent than both wool and linen, since silk was a luxury product imported from the East. A few epigraphic documents of people involved in silk production and/or trade include both men, *sericarii*, and a woman named Thymele Marcella who was a *sericaria* (CIL 6.9892). All inscriptions related to silk come from Rome or the vicinity of Rome.¹¹ Silk was used for luxury garments and bought by wealthy consumers, primarily in Rome. The occurrence of epigraphic references to *sericariae* in Rome, but not elsewhere in Italy, is not likely to be a coincidence, but a reflection of the import of luxury items that were in strong demand in the capital.

Purpuraria

In addition to job titles mirroring textile materials, there are others relating to dyestuffs that were used to colour textiles, most frequently to purple. A fairly frequent occupation in epigraphic sources and related to a colour or dyestuff is *purpurarius*. The meaning of this job title is variously interpreted as either 'producer or dealer of purple dyestuff' or 'producer or dealer of purple products'.¹² Whatever its exact meaning was, it had a wide diffusion in Italy from the south to the northern regions, and with a quantitatively higher proportion of the male version. However, there is also some evidence of women involved in the purple business. One case documents a group of freedwomen who may all have been *purpurariae* (CIL 6.9846). A couple of inscriptions are of freedmen and women of the Veturii family known for its involvement in the textile business. One is a late Republican inscription commemorating a group of freed persons (CIL 6.37820 (= 1.1413)). Among them is a woman named Veturia Fedra who set up and paid for ("... *de sua pecunia* ...") the commemorative inscription of herself, her patron, Decimus Veturius Diogenes, and her husband and *collibertus* Decimus Veturius Nicepor and their joint freedman D. Veturius Philargyr(us). In this inscription, there is also a location mentioned in relation to the occupational title "*purpuraria Marianeis*", which is suggested to be a street in the district of the monuments of Marius, located on the Esquiline, where Veturia Fedra may have been a purple seller (Dixon 2001b, 117).

Other locations in Rome also occur in inscriptions commemorating *purpurarii*, such as *Vicus Tuscus* and *Vicus Iugarius*. The latter is another case of ex-slaves from the Veturii family, a man named D. Veturius Atticus and a woman Veturia Tryphea (Notizie degli Scavi 1922, 144; from the Via Prenestina; Dixon 2001b, 118f). Both of them may have worked in a shop in *Vicus Iugarius* but the job title is primarily related to the man. The same pattern is repeated in an inscription of another group of three freed people, a man and two women: L. Plutius Eros, *purpurarius* in *Vicus Tuscus*, Plutia Auge and Veturia Attica (CIL 14.2433). Plutia Auge commissioned the monument for the three of them. No job title is associated with the women, but considering that the other woman was a freedwoman from the Veturii family, both women may have been involved in the purple trade. The *Vicus Tuscus* was located between the Forum Romanum and the Forum Boarium, providing some indication of popular shopping districts in Rome where part of the trade in textiles took place (Hughes 2007, 88).

Vestiaria?

When the cloth had been finished, it was turned into garments, and, there is more

than one occupation which relates to tailoring clothes. In addition to *vestifici/-ae* already mentioned, there is also *vestiarius*. They are usually interpreted as tailors but some could apparently also sell their own products. Although evidence of male *vestiarii* is found in many towns of Roman Italy, the majority come from Rome. One possible woman, a *vestiaria*, appears in an inscription together with a group of five men, all *liberti* who were *vestiarii tenuarii* (CIL 6.33920).¹³

Conclusions on Women's Work in Epigraphic Sources

The information derived from the epigraphic evidence illustrates that, in the city of Rome, there appears a number of female jobs related to textiles. Some of them come from wealthy households like the Statilii family and the imperial circle, such as the household of the empress Livia. Even outside the city of Rome, the picture of female work does not change radically: the evidence still primarily comes from urban contexts and generally documents slaves and freedwomen. Men dominate in number in relation to women and women appear in a much more limited range of jobs than men do. However, outside the household staff, women occur in more occupations related to textile production than within the wealthy households. The jobs where women are exclusive are those related to spinning (wool), the *quasillariae* from Rome and the *lanifica circulatrix* from Aquileia.¹⁴ All the other jobs performed by women appear also in the male form and there are also several occupational titles that are found only in the male version.

An overarching general issue in defining women, and men, in textile production and trade is linked to the difficulties in defining producers and sellers in the occupational titles. Among others, this discussion has embraced the titles of *purpuraria/-us*, *linteria/-us*, *sericaria/-us*. Were they producers of purple (products), of linen cloth/clothing, of silk products respectively, or were they sellers of these items? There might not always have been a clear distinction between producer and sellers. There may have been many family businesses in which goods were produced and sold in small shops by the same person(s) who produced the goods (Hughes 2007 *passim*, especially for the *purpurarii*).

An extensive epigraphic category which has not been mentioned in the discussion above is the group of persons who were traders, the *negotiatores*. They were involved in the cloth and/or clothes trade, including long-distance trade. Trade in wool or woollen products was extensive and some tradesmen were specialised in wool or cloth/clothing made of wool (Frayn 1984; CIL 6. 9669, 9.862). Sometimes, they were specialised in particular products such as linen, purple, silk and furs.¹⁵ In none of these cases, do we find a woman commemorated as *negotiator*.

Women and Textile Production in Iconography

If one turns to iconography, and especially iconography from a funerary context, a range of visual representations related to textile production can be found. Representations of work, including textile work, appear with some regularity in the funerary imagery on memorials of civilians from the 1st century BC. Such images represent, for instance various stages of textile production, and both men and women occur regularly in these images.

Textile Tools

Textile work and occupations are frequently represented in funerary iconography by tools and items typical of a trade, such as *forfices*, spinning implements or a piece of cloth or clothing. Occasionally, other items also appear, such as combs and dyestuffs.¹⁶ In a few cases, there is an inscription with an occupational title to complete the information about the name of the job, but usually, we do not have a specific name of the occupation illustrated in iconography.¹⁷

At first, this kind of evidence may seem promising due to its association with daily life but, when studying the images more closely, limitations similar to those present in the epigraphic evidence become apparent. For instance, there is a clear gender division of labour and men appear on a larger number of documents and in relation to a greater variety of occupations than women. Sometimes, a man and a woman appear together and they usually represent a married couple. In such cases, the man may have a clear association with an occupation, for instance by holding the implement symbolising a trade. For women, there are almost never such obvious associations with an occupation when they appear together with men. There are also a few examples of actual work scenes where an activity typical of an occupation is performed but they all represent men, never women. In funerary iconography, men can be seen in their professional roles such as fullers, traders or retailers (Zimmer 1982 nos 37–39, 43).

Women and Wool Work

Women are primarily associated with wool work and they appear regularly, shown with symbols of spinning such as spindles, balls of yarn – presumably of wool – and wool baskets (Larsson Lovén forthcoming). Such symbols can be included in scenes where a man and a woman appear together and the woman normally holds the spinning implements (see Cottica 2007, 223, fig. 36.5). One example, now in the collections of Gregorio Profano in the Vatican Museums, is a recarved relief of a woman named Ulpia Epigone (Fig. 6.2; *CIL* 6.7394).¹⁸ She is the only figure in the scene and is represented reclining half-nude on a *kline* below which is a short inscription containing her name. The lower part of the woman's body is covered with a draped piece of cloth and she wears some jewellery: bracelets, a necklace and a ring. Her hairstyle is of the type which was popular in the late 1st century AD. Tucked under her left arm is a small dog and by her feet is a wool basket. This image is loaded with symbols of femininity and in the construction of the Roman female ideal, textile work, especially wool work, played a vital role. Wool work and female virtue were strongly linked and the wool basket by her feet has a strong symbolic value. It both reflects the long-standing tradition of women's work with wool/textiles and is a statement of the woman's moral standards (Larsson Lovén 1998). This woman, Ulpia Epigone, was a freedwoman, i.e. with a background as a slave, and as such she had experienced a working life. In her memorial, she is presented as an attractive and wealthy woman with jewellery and symbols which do not relate to an occupational life. This image may serve as an example of the dichotomy of female iconography, as will be discussed further below. On the one hand, it represents the majority of Roman women who must have worked, but on the other hand, when commemorated, the choice was regularly not to be identified by a professional role but rather as a housewife.

Conclusions on Women's Work in Iconography

In the iconographic evidence, women are not represented as being actively engaged in either textile production or trade. Most commonly they appear together with a man who may sometimes be associated with an occupation whilst the woman is presented as a 'housewife' with no connection to any kind of job outside the household. Or else they may appear alone with symbols of wool work and such images can be seen rather as a visual representation of the female virtues and *lanificium* rather than of an occupation.

There are several parallels between the epigraphic and iconographic evidence. In both types of sources, only a small group includes references to work, but men's work in textile production has been more frequently documented than that of women and with a greater variety in relation to occupations. Regardless of whether women appear alone or together with a man, they are represented as more stereotyped, both in images and in writing. Yet, do the sources also indicate that women took part in textile production and trade to a more limited extent than men?



Fig. 6.2. Funerary relief of Ulpia Epigone; by her feet is a wool basket, quasillum; c. AD 100, Musei Vaticani, Museo Gregoriano Profano, inv. no. 9856. (Photo: Musei Vaticani, Archivio Fotografico).

Readings on Roman Women in Textile Production and Trade

Questions concerning why women's work in textile production and trade has been documented to a lesser degree than men's work have already been discussed by Suzanne Dixon in an article on Roman cloth production some years ago (Dixon 2000–01). Dixon's paper deals primarily with the reading of inscriptions and is a methodological discussion on the use of epigraphic sources. She argues convincingly that a reading of epigraphic sources should not be limited to what is in the inscription – one also ought to try to see what has been excluded (Dixon 2000–01, 10; see also Dixon 2001a). The exclusion of information can be explained by several factors, such as gender structures, social status, time and place – it can be either a deliberate or a casual omission but, in any case, it is likely to bear some significance.

An inscription of a *lanarius* can be used as an example of an exclusion based

originally included in the inscription but is now lost, only *Vicus* remaining. Thus, here we have the portraits of three persons, and there is reason to believe that the occupational title embraced all three of them. However, when there is only the inscription, like the above-mentioned one of a mixed group of *vestiarii* (*tenuarii*), it may be less easy to determine whether one of them was a woman, *vestiaria* (CIL 6. 33920).

The social status of a person is yet another factor that contributed to how the commemoration of an individual was designed. Slaves and freed slaves were more inclined to document their occupation, but not all of them were equally likely to be commemorated by inscriptions. There are more men than women; more urban slaves than those working in rural households; and those with a higher position in the work hierarchy are more frequently commemorated. Thus, a *lanipenda*/-us on a 'managerial' or supervisory level stood a better chance of being commemorated than someone who held a low-status position, such as a weaver or a spinner. This is clearly reflected in the inscriptions where only a handful of weavers and spinners are documented. The majority of the few preserved inscriptions of *quasillariae* come from the monument of the Statilii – eight examples of slave women. A close work relationship seems often to have been the basis for commemoration between freedmen and patrons. As Treggiari has pointed out, *quasillariae* make no reference to their owner and she has interpreted this to mean that the work may have been done in a "factory atmosphere" – i.e. in contrast to Jones's view of women spinning in an "entirely unorganized" way and "in their spare time" (cf. above). The inscriptions from the *monumentum Statiliorum* may reflect quite the opposite: work organised on a large scale and possibly on a full-time basis (Treggiari 1976, 81–84).

The few spinners found in epigraphy may, however, also partly be a result of women in general not always spinning as a full-time job. Female slaves in more modest households than that of the Statilii family could have been engaged in a variety of jobs, including spinning. Both men and women at this level of textile production may also have been too poor to afford a commemorative document, even a humble inscription. Whatever reasons there may be for the few spinners and weavers found in funerary inscriptions, they are good examples of the discrepancy between the sources and a (presumed) actual work situation where spinning and weaving must have been going on all over the empire and on a daily basis, but with very few traces left in the sources. The occurrence of *lanipendae*/*lanipendii* may indirectly also provide some evidence of spinners and weavers, although these occupations themselves are not found in abundance (Treggiari 1976, 84).

Another imbalance in the funerary inscriptions is that among slaves and freed people and the freeborn. The traditional upbringing of freeborn girls was supposed to include wool work and a girl was expected to have made her own wedding dress in wool as a proof of her skills in textile work. Historically, textile production was a domestic task performed by the women of the household, slaves and free, and supervised by the matron of the house (cf. the job of a *lanipendia*). The importance of textile production cannot be overestimated since it was probably the most essential contribution of many women to the household economy. Gradually, production was developed on a larger scale, including specialised workers, which is reflected in epigraphic job titles especially for male slaves and freedmen.

Married women continued to be praised on their tombstones for working in wool (*lanam fecit* or *lanifica*), but not primarily in a job context. This is often linked to other positive characteristics of women such as chastity and modesty – all of them symbols of the good and industrious housewife.

Much of what characterises the representation of work in epigraphic sources can apply also to iconography and consequently to the reading of that evidence. The exclusion of information on gender, social status etc., dictated the modes of commemoration. People with a servile background were more inclined to document their occupation than freeborn, especially in an urban context. Men were more frequently connected to their occupations than women who are largely represented in traditional female roles as wives and mothers. The distribution of occupations represented visually is biased in such a way that jobs including dirty and sordid tasks, i.e. low-status jobs, are rarely shown while occupations with a higher status appear more frequently (Zanker 1975, 300). In the few cases when low-status jobs do occur in visual representations, they are usually performed by men.

Conclusions: Textile Work, Gender and Female Identity

As mentioned at the beginning of this chapter, there are no comprehensive sources on Roman textile production. A combination of evidence is therefore not only desirable, but also necessary when discussing the people involved in producing and trading textiles in Roman times. Ancient literature, epigraphy and iconography all provide useful information on the topic but from different angles. Funerary inscriptions and memorials are documents commissioned by people who would have been involved in the textile business themselves while literary sources usually present a different perspective. The abundance of images and especially inscriptions may at first seem promising, but both epigraphic and iconographic genres have limitations and shortcomings that obstruct interpretations, notably those concerning women. Both genres are imbalanced in a number of ways: the majority come from urban contexts; more men than women are documented; more slaves and freed than freeborn appear in relation to work; and the job titles tend to focus on people performing jobs considered of higher esteem rather than low-status jobs, such as spinners and weavers.

Commemoration in any ancient media was directed by conventions of the time, and the reluctance to document women at work, as we can see both in writing and in images, reflects the social status of an individual and the ideology of gender roles more than the social reality. The housewife remained the ideal for women of many social groupings – i.e. a person who was not supposed to work outside the household. Many women had to work, but the Roman ideology of work and of masculinity and femininity had a strong impact on the documentation of women's work. In case of textile production, men's work appears more diverse than women's, whose work with textiles was mostly connected with spinning and they continued to be praised on tombstones, in writing and in iconography, for their skills in wool work.

In contrast to what can be found on women's tombstones, Columella in the mid-1st century AD claimed that the women of his day were too idle to engage in wool work, even as supervisors, and that women preferred to buy expensive clothes rather than take part in household textile production (Columella 12, praef.

9–10). Does this imply that expressions like *lanam fecit* or *lanifica* were only symbolic and that, at least, wealthy women no longer engaged in household textile production? Or did women continue to produce textiles in a domestic setting? It may be difficult to make any general inferences on this issue since it is again a matter related to social class. Women in wealthy families had slaves to do the work, and if production was developed on a large scale, it was perhaps a business with commercial interests, entirely run by slaves even in supervisory capacities such as *lanipend(i)ae/-i*. However, freeborn women in less wealthy circumstances most likely continued to produce textiles and clothes at home, possibly with the assistance of female slaves, and home-based textile production may still have been an important contribution to the household economy.

Whatever conclusions may be drawn concerning home-based textile production and female work, wool work was undoubtedly one of the foremost and persistent symbols of female virtue and female identity, at all social levels. Augustus claimed to be dressed in home-made clothes, produced by the women of his household, although in his day home-spun cloth appears to have gone completely out of fashion at this level in the social hierarchy (Suet. *Aug.* 64, 73). Naturally, the presumed home-made clothes of the emperor can be interpreted as more of an ideological statement than a reflection of women's general role in textile production and as part of Augustus' attempts to revive ancient traditions, such as having the women of his family spin and weave. In a time of recent political instability, it was important to use traditions and symbols that could appear ancient and could signal an unbroken, stable heritage from the past. The imperial family was to act as a role model for the Roman citizens. Thus, the women of the imperial family had to appear in public in traditional female roles.

Women who occupied themselves with traditional female tasks, such as wool work, were equated with good moral standards; conversely, women who did not care for this kind of work symbolised decadence and moral decline (cf. Columella above). The praise for women who did wool work may thus be read as a symbol of female virtue but it may also have corresponded to a reality in which women, and not men, spun wool. The opportunities open to respectable women whose family circumstances demanded that they worked were probably limited, especially if they were not involved in a family business. Women who did work in a smaller business run by family members, contributed to the family economy but their contribution was seldom thought of as worth specifying, by either the father or the husband. Occasionally, however, it was noted by the women themselves. As usual, women's public identities were primarily defined not by their work but by their traditional family roles, as daughters, wives and mothers – while men, especially of slave and freed status, were more regularly associated with the family business.

All our ancient sources are more or less biased with a male focus and this situation automatically implies limitations when it comes to the study of women. The answer to the question of whether women took part in textile production to a more limited extent than men is thus more complicated than a simple yes or no, since we have to consider the general conventions directing how men and women were commemorated. The modes of commemoration were strongly directed by social status and gender ideologies, and therefore, women's role in the economy of Roman textile production remains somewhat difficult to define. However, women were definitely there, both in production and in trade, especially it seems, involved

in local, small-scale trade carried out in modest (work)shops.

The “meagre crop of inscriptions”, as the epigraphic evidence was once characterised by Jones (1960, 183), has in fact proved to be a rich source of information on Roman jobs and work, complemented with information from iconography. Both kinds of sources, with all their limitations and shortcomings, have proved that women did take part in textile production to a much greater extent than merely spinning in an “entirely unorganised” way and “in their spare time...” (Jones 1960, 190). Yet, the way in which women’s work was documented is largely a result of Roman gender ideologies which emphasised female identities in their family roles rather than their professional capacities.

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- 1 Two years later, in 202 BC, Tiberius Claudius Nero was elected as consul. His fellow consul was M. Servilius Pulex Geminus.
- 2 Some examples of recent studies on various aspects of textile production and clothing are: Bonfante and Sebesta 1994; Gillis and Nosch 2007; Gleba 2008; Olson 2008; Edmondson and Keith 2008.
- 3 Jones 1960, 183: “We possess lamentably little information about the weaving and clothing industry of the Roman empire”.
- 4 Cf. note 9 on the suggestion of *lanarii* as possible weavers.
- 5 The traditional role model was Tanaquil, wife of Tarquinius Priscus. She was recorded by the Romans as the *summa lanifica* who had woven the first *tunica recta*. The wife of the *flamen dialis*, the *flaminica*, was also considered as a model *lanifica*; cf. Bonfante and Sebesta 1994; Verg. *Aen.* 8.664.
- 6 The inscription *CIL* 6.6300 is from the monument of the Statilii.
- 7 For instance, *CIL* 6. 11602 of a woman who was *lanifica, pia, pudica, frugi. casta, domiseda*.
- 8 Museo Archeologico di Aquileia, inv. no. 49941. The stele is 1.10 m high and 0.59 m wide.
- 9 Another interpretation of *lanarius* is a weaver; see Dixon 2000–01, 9 n. 16 for further details.
- 10 Another example of an inscription where both a man and a woman have an occupational title related to textiles is *CIL* 6.9495: a woman called Musa was *quasillaria* and the man named Cratinus was a *lanipendus*. For more examples of other combinations of male and female occupations in the same inscription, see Treggiari 1976, 98.
- 11 Cf. two epigraphic sources from Tivoli commemorating the same man, M. Nummius Proculus, who was *sericarius*; *CIL* 14. 3711–12. From Gabii, there are two references to a man who was a *negotiator sericarius*; *CIL* 14. 2793, 2812.
- 12 Cf. discussion above on the meaning of the occupational title of *lanarius*. See also Hughes on the discussion of *purpurarii* as producers/dealers in purple products other than textiles; Hughes 2007, 89–91.
- 13 In addition to the men and women involved in the production of textiles in wealthy aristocratic households, there were also those who took care of the wardrobe of the master or the mistress, the *vestiplica* (*vestipica*). For *vestipliciae* see *CIL* 6.9901, 33393, 33395, 37825. One example of a *vestiplica* from outside Rome is found in *CIL* 9.3318, from Castelvecchio Subrego. For the male equivalent, a *vestip(l)icius*, see *CIL* 6.7301, 8558–60, 9981.
- 14 There are, furthermore, two single cases of female workers in specialised textile jobs, one of an *auri vestrix*, a tailor of clothes of gold; *CIL* 6.9214; Joshel 1992, 176. The other is of a spinner of gold thread, an *auri netrix* (4th century AD); *CIL* 6.9213. The latter commemorates a girl named Viccentia who was not even 10 years old at her death. This also says something about the age at which Roman children had to start working. Both inscriptions are from the city of Rome. The gold-related jobs are also discussed by Chioffi 2004.
- 15 For various specialised *negotiatores*, see *CIL* 5.5932 (linen products and possibly capes), 6.9670 (linen, *neg. lintearius*), 10.7330 (linen), 6.33888 (*neg. purpurarius*), 6.9678 (*neg. sericarius*).
- 16 Large bales, presumably of wool or cloth, are another symbol of textile work and trade. It is recurrently found in Roman Gaul but not in the iconography of Roman Italy. For an overview of iconographic representations of textile work from Roman Italy, see Zimmer 1982, nos 34–46a.
- 17 Cf. *CIL* 6.9498 *lanarius* and a sheep; 11.1069a, 11.6604, *purpurarius* and possible shells and containers of dyestuff.
- 18 This relief originally derives from the tomb of the Volusii in the Via Appia but was recarved for Ulpia Epigone possibly around AD 100; for further details, see d’Ambra 1989.
- 19 According to Hughes, the relief is originally from Rome, but is now kept in the Museo Civico at Fiesole. The preserved inscription reads [----]a P Clodi Philonici Eurania Mu(lieri) Purpurari. de Vico ----.

7. Trade, Traders and Guilds (?) in Textiles: the Case of Southern Gaul and Northern Italy (1st-3rd Centuries AD)

Jinyu Liu

The production and consumption of textiles, was, next to building, the most important non-agrarian economic activity in ancient society. The discourse on the Roman economy, however, has long gravitated towards the highly politicized issue of the grain supply, as well as the geography of trade mapped out by non-perishable remains – especially pottery. It is only recently that the production, distribution and consumption of textiles have informed the current discussions on the nature, scale, and structure of the Roman economy.¹ Admittedly, the archaeological evidence is fragmentary, and quantitative data on the output of textiles and the labor force are scanty. The epigraphic, literary, papyrological, and legal evidence, nevertheless, provides helpful glimpses of the geography of the Roman textile economy, as well as the experience of the urban-based textile artisans and tradesmen. This paper is not intended to be a comprehensive treatment of the textile economy in the Western Roman Empire. Rather, my focus is on how the impact of empire was manifested in the textile sector in northern Italy (Augustan *regiones* VIII-XI), and southern Gaul (Gallia Narbonensis, Gallia Aquitania, and part of Gallia Lugdunensis).² The roles of the textile traders and craftsmen are explored here within the context of the textile trade.

In an article exploring the geographical location and market structure of the Roman textile industry, Willem Jongman proposed that an important feature of the Roman textile economy may have been the trade in wool, especially that of higher quality, which was typically exported in raw form from the less densely populated areas in northern and southern Italy to the more populous cities in central Italy, so that manufacturing laid in close proximity to its ultimate consumers (Jongman 2000, 187–197). According to Jongman, unlike in Medieval and Early Modern Europe, “the raw wool was not exported to a small number of textile towns, from where textiles would be exported to distant markets. Instead, the wool was turned into textiles for local consumers...This dispersed manufacturing of textiles is, perhaps surprisingly, a sign of the greater integration and larger scale of the Roman economy, compared to Europe” (Jongman 2000, 189). Attractive as Jongman’s theory is, this model can only be partially true for at least two reasons: first, Jongman isolated Italy from the nearby provinces; second, he may have dismissed the relevance of literary references to clothing production too quickly. For him, most of these references were “in fact praise for (and sometimes criticism

of) the quality of the raw wool of particular cities".³ Jongman is surely correct about the elusive nature of ancient sources. However, a quick dismissal of the references to textile production in various places seems to be unwarranted by our sources. Alternative models of the market structure of the Roman textile industry can certainly be proposed. Based on an examination of the literary, epigraphic, and archaeological sources, this paper suggests that southern Gaul and northern Italy not only produced wool, but may have been the supply centers of non-luxury clothing and textiles for non-local trade. Among the stimuli behind these phenomena, the demand both from the city of Rome and the military in the frontier provinces may have been significant.



Fig. 7.1. Map of locations mentioned.

Morley (1996) has brought into focus the economic impetus that arose from the growth of Rome and the resulting demand for goods and supplies. The population of Rome may have been no less than 700,000 at the death of Augustus in AD 14, and perhaps remained stable at around one million at the peak of the empire (Brunt 1987, 376–388; Morley 1996, 38). The concentration of so many consumers in a single place posed a massive challenge to a pre-industrial economy (also see Morley 1997; Lo Cascio 2007, 640). To supply a city of such magnitude would have involved resources from various places outside Rome. As far as textiles are concerned, the ancient sources inform us less about the role of the neighboring regions in supplying Rome with clothing than they do about the farther regions. Literary sources make it very clear that Rome (and Italy) imported textile products from such regions as Liguria and the Po Valley. According to Strabo (4.6.2),

Cisalpine Gaul exported the Ligurian tunics (*chitones*) and outer cloaks (*sagoi*).⁴ The regions around Patavium were famous for *gausapae* (woolen cloaks) and *tapetes* (carpets), and exported various types of clothing to Rome. Strabo (5.1.7) praised the skills of the populace of Patavium, which sent vast amounts of manufactured goods to the Roman market, especially clothing of all kinds.⁵ Martial referred to *bardocuculli* (hooded overcoats) from Gallia,⁶ *lodices* (rugs/blankets) from Verona, and tunics and *paenulae* (overcoats) from Patavium.⁷ The list could continue, but the essential point is clear: in the 1st century AD, Cisalpina was considered a locus for textile production for Rome and Italy (Noé 1974, 918–932). The textile business may have been one of the main sources of considerable wealth in places like Patavium. According to Strabo (5.1.7), Patavium had an impressive number of 500 equestrians.

The development of textile production mirrored the development of sheep-rearing and wool production. This is attested not only by literary sources but also by inscriptions and archaeological finds. Strabo (5.1.12) mentioned soft wool (*erean tēn malakēn*) from the regions around Mutina (*Regio VIII*) and the river Scultenna. Pliny the Elder (*HN* 8.190–193) declared that no white fleece was valued above that from the Po area. Columella praised the outstanding quality of the wool from northern Italian cities such as Altinum, Parma and Mutina, as well as that from southern Italy.⁸ Martial (5.13) confirmed that there were large flocks of sheep in Parma. His ranking of the wool, however, was slightly different: the quality of the wool from Parma was only second to that from Apulia; wool from Altinum ranked third (Mart. 14.155; Moeller 1976, 10). These fine types of wool, however, were not destined for the ordinary consumer. Diocletian's Price Edict chapter 25 confirmed the high price that wool from Mutina and Altinum commanded: they were eight to twelve times more expensive than the cheapest wool in the edict. The wool from northern Italy and southern Gaul, however, was not necessarily all of high quality. According to Strabo (5.1.12), Liguria and the country around Symbri produced the coarse wool (*tēn tracheian*) from which the majority of Italian households were clothed. The regions around Patavium seemed to have produced wool of medium quality (Strab. 5.1.7.; cf. Morley 1996, 154). *Te Cadmea Tyros, me pinguis Gallia vestit: Vis te purpureum, Marce, sagatus amem?* – These words from Martial (6.11) may be a literary topos (Morel 1978), illustrating the conventional contrast between Gallic wool or clothing and high-quality materials as well as the attachment of low status to those who wore clothing either imported from Gaul or made of Gallic wool. The question is whether expressions such as *pinguis Gallia* in Martial were entirely devoid of geographic implications, and simply referred to the quality of certain types of wool.⁹

There is little doubt that there were intense activities surrounding wool in northern Italy. We find highly specialized professionals engaged in the specific stages of wool processing. Inscriptions put up for, or by, wool carders, wool combers, and wool washers have been found in Brixia, Regium Lepidum, Altinum and Brixellum.¹⁰ These wool-workers appeared to be of humble status and modest means. In Regium Lepidum, the wool combers and carders put up an inscription to show their gratitude to Gaius Pomponius Felix, a freedman who held the position of *VI vir Augustalis Claudialis*, because he bequeathed them gifts, some clothes, and burial allowances.¹¹ The wool combers of Brixia put up an inscription for a fellow of servile status.¹² In Altinum (*Regio X*), Publius Paetinius Aptus, a freedman, built

a tomb measuring 810 (= 45 × 18) ft² for himself, his wife, and the *collegium* of wool washers.¹³ Paetinius was very likely a member of the *collegium*. The size of the tomb was by no means small by local standards,¹⁴ indicating his relative success in business.

It is, however, not clear to what extent the processed wool was intended for export to the regional market or to central Italy and Rome, or for the production of garments locally, whether for the local market or for export. In Altinum, for example, the archaeological finds of numerous terracotta loom weights indicate weaving activities of no small scale (Cottica 2003, 272), although one may argue that production did not have to signify export, but may have served to satisfy local and domestic consumption. Even more interesting are four lead tags recording the weights or bales of wool of different colors, and/or numbers of *lacernae* (cloaks), and perhaps *gausapa*.¹⁵ These lead tags were usually attached to packages, suggesting that both wool and garments were trade objects. Unfortunately, however, the destinations of the packages are unknown. It is, nevertheless, entirely possible that Altinum was not merely a center of sheep-rearing or wool production, but that it may also have played an important role in textile production and export (Buonopane 2003, 291).

Some merchants indeed seemed to have acquired wealth and status through the wool trade. A tombstone found in Mutina (*Regio VIII*), for example, mentioned a wool merchant (*negotians lanarius*) of freedman status with the name of Quintus Alfidius Hyla.¹⁶ He was a *sevir* at Forum Sempronii (*Regio VI*) in central Italy, but was also involved with a *colleg(ium) harenariorum*, or an organization of gladiators in Rome. The inscription demonstrated not only his translocal connections, but also his wealth and status. It is not clear, however, where he came from originally. The *nomen gentilicium* Alfidius is not helpful in determining his hometown. The question of the direction of the flow of his goods must be left open. It should also be noted that *negotians lanarius* did not necessarily only signify the merchant of wool in raw form. It was quite possible that the wool dealer may also have traded in yarns and threads, if not other wool products as well. It is important to note that wool processing and yarn spinning were more time-consuming than weaving. In fact, scholars of textile economy commonly recognize spinning as the production bottleneck in pre-industrial textile production (Wild 2002, 8; Berman 2007, 10). It may have taken five or more spinners to supply one weaver. Thus, spinning would have involved a much larger labor force, supplied by home-based female ‘workers’, slaves, rural part-timers etc. (Cottica 2003, 262–271; see also Gostenčnik in this volume). The trade in wool textile material in the form of yarn may have been an integral element in the textile economy. The relationship between Quintus Alfidius Hyla and the *colleg(ium) harenariorum* of Rome was not specified. Perhaps he supplied the gladiators with outfits?

Turning to southern Gaul, in the alluvial plain of Crau near Arelate in Gallia Narbonensis, for example, a series of very large, covered, sheep-pens have been found, “indicating a highly organized development for the potential of this inhospitable environment to provide seasonal pasture for flocks of sheep that perhaps totaled over 100,000 animals”, a scale with no Iron Age precedent in the region (Woolf 2001, 56; Pliny, *HN* 21.57). Furthermore, the size of sheep increased in these regions, which meant more meat and wool. As will be further discussed below, southern Gaul was also an area where the activities of textile dealers

(*vestiarii*, *sagarii* and *centonarii*) are amply attested. A *vestiarius* from Narbo, for example, was found in Rome.¹⁷

What is equally important is that textile products from southern Gaul and northern Italy were sent not only in the direction of Rome and central Italy but also to the military on the Rhine and Danube frontiers, where there was a concentration of consumers. Military accounts show that a large percentage of a soldier's allowance was spent on clothing (*RomMilRec* 63, col. ii. 18). Clothing of not particularly high quality sometimes was transported over long distances to supply the army, especially since military supplies were not subject to customs dues on inter-provincial trade. A papyrus dated to AD 100–105, for example, attests that the *Coh(ors) I Hispanorum Veterana* stationed in Moesia at that time sent soldiers to acquire clothing from Gaul.¹⁸ Inscriptions help us identify important commercial centers that link the north and the south, as well as tradesmen with translocal connections.

That Mediolanum (modern Milan, *Regio* XI) was a center for the textile trade is evidenced by the presence of dealers of *saga* (*negotiatores sagarii*)¹⁹ from other regions in Mediolanum, as well as from the presence of dealers of *saga* from Mediolanum in other cities. Not only was there a *negotiator sagarius* from the south (Apulia) in Mediolanum, but there was also one from the north (Mediomatrici, Gallia Belgica),²⁰ who most likely transported clothing to supply the Rhine armies (Verboven 2007). The dealers of *saga* from Mediolanum were also present elsewhere. A *sagarius Mediolanensis*, for example, had a tomb built for his friend and himself in Ricina, Picenum (*Regio* V).²¹ The traces of tradesmen with regional or transregional links can also be found in several other northern Italian cities. In Novaria, a city further west of Mediolanum in *Regio* XI, a tombstone referred to a *Vivir Aug(ustalis)* of the *civitas Helvetiorum* (Aventicum), who was also specified as a clothes merchant on both sides of the Alps (*negotiator vestiarius Cisalpinus et Transalpinus*).²² An altar found in Boglium (*Regio* X) was dedicated by Gaius Valerius Priscus, a clothes dealer from Aquileia, *Regio* X (*vestiarius Aquileiensis*).²³ In Bononia (*Regio* VIII), Lucius Ursius Sosander, a *vestiar(ius) Bonon(iensis)*, was a *Vivir* in his hometown Cremona (*Regio* X). It seems that he was based in Bononia, where he had a medium-sized tomb measuring 625 ft² built for his wife and himself.²⁴

In Elusates, Gallia Aquitania, a *vestiarius* who was a citizen of Augusta Treverorum, Gallia Belgica (modern Trier) made a dedication to Mithras (*Deus Invictus*).²⁵ In Gallia Narbonensis, an Italian clothes dealer was buried in Nemausus (modern Nîmes, France).²⁶ Vienna (modern Vienne, France) may also have been a significant center for textile trade. A tombstone found there involved two Rusonii, who seemed to have come from Lugdunum, or at least to have had close connections with Lugdunum.²⁷ Gaius Ruson(ius) Muron erected the tombstone for Gaius Ruson(ius) Secundus according to the latter's wishes. A *sagarius* by occupation, Secundus held the position of (*sex*)*vir [Aug(ustalis)]* at Lugdunum. Muron, Secundus' heir and fellow freedman (*collibertus*), was an ex-magistrate among the (*sex*)*viri A[ug(ustales)]* of Lugdunum, and a member of the *corpus sagariorum*. He was also an ex-magistrate among the *centonarii*, whom I have identified as textile craftsmen and/or tradesmen based, among others, on a philological investigation of the word *cento* and the close relationship between the *centonarii*, the *sagarii* and *vestiarii* (Liu 2009). It seems likely that the occupational

spheres of these clothiers – the *centonarii*, the *sagarii* and the *vestiarii* – overlapped to a great extent; they all catered mostly to the need for low- and medium-quality textiles. In any case, the inscription involving the two Rusonii attests to close trading connections between Lugdunum and Vienna, the latter of which, situated on the Rhodanus River, was itself a meeting place of trade routes.²⁸ The epitaph for P. Vettius Gemellius, *sagarius Romanens(is)* also points to the trading activities relating to textiles in Vienna. Vettius Gemellius, who was buried at Vienna, might have originally come from Rome and/or maintained a business relationship with Rome.²⁹ Lugdunum itself was situated at the confluence of the Araricus (Saône) and the Rhodanus (Rhône), as well as at the intersection of great Roman roads. From Lugdunum, goods coming from southern Gaul and northern Italy could be transported further north.³⁰

Notably, being four among the fourteen *gynaecea* in the West, Mediolanum, Aquileia, Arelate, and Lugdunum remained important centers for supplying the state with clothing in the 4th century AD (*Not. Dig. Occ.* XI. 49–51, 54; Jones, *LRE*: 837; Wild 1976, 51–58).

In terms of the geographical location and the market structure of the Roman textile economy, the conclusion reached so far in this paper is necessarily different from Jongman's mentioned at the outset. There was certainly luxury or high-quality wool that was exported to different destinations. Luxury wool was certainly not destined for the ordinary consumers. The literary sources suggest, however, that coarse wool and wool of medium quality, and products made of these non-luxury wools dominated the market.³¹ Northern Italy and southern Gaul constituted important sources of ready-made garments, blankets and other types of textile products for the markets in both Italy, including Rome, and the frontier provinces. It is interesting to note that textile products may reach their destinations in an unfinished state. De Ruyt has recently suggested that cloth destined for Rome may have been shipped to Ostia in an unfinished form, and treated after being unloaded in Ostia.³² In view of the importance of northern Italy and southern Gaul in textile production and trade, it is reasonable to suggest that these regions may have had little surplus wool themselves, but may actually have obtained wool from elsewhere. According to Strabo, in his day, wool came from Turdetania (southern Spain), which used to export large quantities of clothes (Strab. 3.2.6; Vicari 2001, 66–67). Wool production remained an important industry in Baetica, at least until the 2nd century AD (Fear 1992, 151, citing Mat. 12.65.5). The destinations of this wool were not specified. It would not have been surprising if much of the wool went to northern Italy and southern Gaul. Southern Italy would have been another source of wool for Rome and the other parts of Italy (Grelle and Silvestrini 2001, esp. 99–100). The Canusian wool seemed to have made its way to Gaul.³³

Crucial for facilitating the flow of goods were the textile tradesmen and craftsmen. Their mobility and translocal connections have already been mentioned earlier in the chapter. In addition, there is a concentration of inscriptional evidence concerning the *sagarii*, *vestiarii* and *lanarii* in Rome, *Regio* I, *Regiones* VI, VIII, X and XI, Gallia Narbonensis and Gallia Lugdunensis (see Table 7.1). Rome alone yielded 65 inscriptions attesting to the activities of these dealers and craftsmen. Twenty-eight out of the 90 inscriptions outside of Rome came from the Augustan *Regiones* VIII, IX, X and XI; 15 came from Gallia Narbonensis and Gallia

Lugdunensis. These references cannot simply be taken as anecdotal success stories of the freed population, which tended to be overrepresented in the epigraphic media. It is by no mere coincidence that the associations (*collegia*) of textile tradesmen and craftsmen not only appeared early in these regions but also flourished in the first three centuries AD. The *vestiarii* of Aquileia, for example, had a relatively large collective tomb, *loc(us) m(onumenti) vestiariorum*, measuring 3,200 ft², which probably dates to the 1st century AD (IA 687 = AE 1931. 96). The *sagarii* formed *collegia* only in Rome (CIL VI. 339, 956) and Lugdunum. As mentioned earlier, the formal or informal organizations of the *lanarii*, in particular those specialized in certain stages of wool processing, are only found in northern Italy. Furthermore, the geographical distribution of inscriptions relating to the *collegia centonariorum* clustered in northern Italy, southern Gaul and the Danubian provinces (Liu 2009, 29–56). Chronologically, the earliest inscriptional evidence for the *collegia centonariorum* comes from Rome and northern Italy, especially *Regio X*. Not surprisingly, the inscription mentioning *collegium centonariorum* is dated as early as AD 69 in Patavium, which would suggest that the *collegium* may have been founded before or during the Julio-Claudian era.³⁴ A further question, i.e., the nature and functions of these *collegia*, now needs to be addressed.

Table 7.1. Geographical distributions of inscriptional references to *sagarii*, *vestiarii*, and *lanarii*.

	<i>Sagarii</i>	<i>Vestiarii</i>	<i>Lanarii</i>
Rome	16	37	12
Regio I	4	8	2
Regio II	2	1	2
Regio IV	1		
Regio V	1		
Regio VI	1	2	2
Regio VIII	2	5	3
Regio IX		2	
Regio X		6	5
Regio XI	4	1	
Gallia Narbonensis	4	4	2
Gallia Lugdunensis	2	3	
Gallia Belgica		2	
Gallia Aquitania		1	
Germania Superior	1		
Germania Inferior		1	
Hispania Citerior			1
Baetica	1	1	
Africa Consularis	1	1	1
Raetia		2	
Numidia		3	1
Byzacene		1	
Mauretania		1	
Moesia Inferior		1	
Dalmatia			1?

Scholars used to draw a clear line between Medieval/Early Modern guilds and Roman *collegia*, seeing the former as economic agents and the latter as social and convivial bodies (Waltzing 1895–1900; Finley 1985, 81, 138). This dichotomy between economic and social bodies proves to be too simplistic if not misleading, especially since social capital theory and new institutional economics have amply illustrated the interactions between social and economic dimensions. Activities that we tend to label as ‘social’ may have had significant economic consequences. For example, members of a group engage in repeated transactions in multiple spheres – economic, religious, social – which ensure multiple means for the members to obtain information on, punishing deviance in, and urging collective action on one another (Coleman 1989; Ogilvie 2004; Ogilvie 2005, esp. 17). Such

an analytical framework has the advantage of enabling economic and social historians to go beyond the stated purpose(s) of the *collegia*, which often surrounded banquets, burials, cultic activities and interactions with the elite,³⁵ and delve into the wider socio-economic significance and consequences of the many forms of group activities and regulations, some of which may seem mundane or trivial at first glance. The frequent emphasis on table manners in the collegial by-laws,³⁶ for example, can be seen as more than showing concern for maintaining order; in fact, they can be considered a mechanism for exposing and punishing the non-conformist, whose reputation would consequently suffer. An emerging research direction focuses on *collegia* as mechanisms to cope with risks, information flow difficulties as well as failures/weaknesses of ‘formal’ institutions.³⁷ Peter Bang, for example, applies the concept of ‘bazaar’ to understanding the ancient markets: they were characterized by uncertainty and unpredictability; they were also a mixture of retailers with large wholesalers, of the local market and long-distance market. To cope with the irregularity and resulting risks involved in conducting business, the bazaar also developed commercial strategies including the “parcelling of capital, low standardisation of products, opportunistic speculation and the formation of segmented social networks” (Bang 2006, 80). The so-called cultic or social associations in the Graeco-Roman world could be seen as such social networks. It is crucial to note that as far as the membership compositions of these associations are concerned, the members seemed to have been recruited on a mixed basis, incorporating the very rich or the relatively wealthy tradesmen, and the less wealthy, both freeborn and freedmen (Liu 2009, 161–263). There is no indication that merchants and craftsmen might/could not belong to the same *collegium*. In this connection, the *collegia* may quite likely have functioned as a site for the interactions between large-scale wholesalers and small-scale producers or retailers.

Historians focusing on the Medieval and Early Modern periods are ahead of the ancient historians in exploring organizations such as guilds and fraternities as risk-averting, cost-reducing and reputation-building mechanisms.³⁸ In fact, as the intensified research on guilds has begun to transform our understanding of their roles in Medieval and Early Modern societies, their value as comparanda for the study of *collegia* has also been increased. It has long been maintained that:

The guilds satisfied a number of requirements. Among the various tasks of the guilds, there was usually that of collective organization of religious ceremonies, charity, and mutual assistance. These tasks were not a smokescreen. For a craftsman of the time, participation by his own guild in the town’s procession in honor of the patron saint or the Virgin Mary was as important as, if not more important than, a discussion of wages and production (Cipolla 1976, 94; see also van Nijf 1997, esp. 12–8, 82–107).

Recent studies have made it clearer than ever that many of the Medieval and Early Modern guilds had a variety of dimensions, and that they could not and should not be reduced to mere regulatory agents that were only, or primarily, concerned with price fixing or market demarcation. Nor does the incorporation of the restrictive and protective measures in a number of guild statutes necessarily point to the power wielded by the guilds in their respective trades. The guild statutes cannot always be taken as a reliable indicator of the power of the guilds because we often cannot measure the gap between what the guild laws laid down and what actually

occurred. Historians have increasingly come to acknowledge the 'normative and idealistic' nature of the guild statutes. The reality of the operation of the guilds was much more complicated. In fact, the guilds' 'banning power' varied greatly from region to region, and from guild to guild (Borelli 1998, 21; Epstein 1998, 685). Whether a guild was able to regulate a trade depended on a variety of factors ranging from its relationship with the local authorities and/or the State, its relationship with other guilds, and its ability to maintain its financial profile.³⁹ Some guilds had inherent weaknesses: it was by no means rare that certain guilds could not even manage to collect membership dues, not to mention serve as regulatory agents. In addition, the guild's solidarity could be threatened by various factors, such as the differences among the masters themselves (Friedrichs 1995, 97).

It is, nevertheless, pertinent to ask: What made it necessary for some of the Medieval and Early Modern guilds to encourage regulatory and restrictive measures? Did the same necessity also exist in the Roman Imperial period? Some scholars of the Medieval or Early Modern period have argued that in certain places the restrictive attitudes and practices were caused by "the narrowness of the market...so as to guarantee a subsistence level for the master artisans" (Friedrichs 1995, 97; Borelli 1998, 19–20). In other words, the lack of regulatory stipulations may well have been a positive sign of market strength and scale.

Returning to the *collegia* of the *centonarii*, *vestiarii* and *sagarii*, business opportunities in Rome, Italy and the frontier provinces would have provided considerable incentives for investment and business expansion, as for example demonstrated by the above-mentioned archaeological data from Arelate. Such opportunities would also have given rise to numerous occasions for cooperation and competition among craftsmen and tradesmen. The initial formation of these *collegia* might have been a result of intensified economic activity and even a response to it. The stimulus or push to form *collegia* might also have come from the military, since it would have been easier for the latter to deal with the head(s) of organizations than with individual tradesmen or craftsmen. This aspect has been amply attested in the papyrological evidence (cf. Sheridan 1998, Appendix 2). It may also have been easier, in this connection, for these *collegia* to obtain government support and authorization. In the city of Rome, the *collegium sagariorum* may have been closely involved in supplying the Praetorian Guards with clothing, given that it had taken Hercules Salutaris, the patron deity of the first cohort (*cohors prima*) of the Praetorian Guards, as its own patron god.⁴⁰ The *collegia centonariorum* were granted privileges such as immunity from compulsory public services perhaps no later than Commodus (AD 180–192).⁴¹

By way of conclusion, I will summarize how the study of textile production and trade can contribute to a better understanding of the Roman economy.

In a recent book entitled *Supplying Rome and the Empire* (Papi and Bonifay 2007), the emerging consensus refutes the assumption that transport costs confined trade to a handful of luxuries. Textiles were not included as a topic in this book, as duly noted by one of its authors.⁴² The discussion of this paper provides yet another testimony to its thesis. Ancient data on prices and transport costs are too fragmentary to sustain a scientific cost-benefit analysis. We cannot assume, however, that textile trade was confined to high(er) quality wool or garments. Relatively cheap wool items may have made up a great, if not greater, part of the

textile trade, as indicated, for instance, by Strabo (5.1.12). This seems to have been the case in Medieval Western Europe.⁴³ In the 12th and 13th centuries, the cheap, light and coarse fabrics were an important element of distant international markets, until the market was disrupted by “overlapping, entangling sets of wars and conflicts”.⁴⁴ Thus the reorientation away from the cheaper kinds to concentrate increasingly on much higher quality and much higher priced woollens in the 14th century was caused by the rising transaction costs in the international textile trade due to widespread and chronic warfare. Under the *pax Romana*, northern Italy and southern Gaul were well positioned to supply both Rome and its environs as well as the frontier provinces with all kinds of goods including textiles. The literary, epigraphic and archaeological evidence, discussed above, points to the expansion of sheep rearing, translocal connections of the tradesmen in clothing, the relatively early emergence of organized dealers/craftsmen in textiles, and the export of wool products, either in their finished or unfinished state, in these regions. It must be noted that it is by no means the intention of this paper to deny that textile production took place in other regions, or that textiles were also produced for local or regional consumers. Nor do I deny that wool was an object of trade. However, the sources do not allow us to overemphasize the flow of wool in raw form from northern and southern Italy to central Italy, as suggested by Jongman. As far as the transport patterns of textiles in Gaul and Italy are concerned, it should be noted that most of the important cities mentioned in this paper were inland rather than coastal port cities, which means that transportation by inland waterways or roads would have been more important than seaborne transportation, the latter being a favorite subject among economic historians. Inscriptions reveal the complex translocal connections of some of the textile tradesmen. At the end of the day, it was the responses of these tradesmen and craftsmen, both rational and irrational, to market potentials, to legal advantages and benefits, their competence or sometimes the lack thereof, and their intricate social networks that shaped and reshaped the circuits of trade. In the epigraphic media, they proudly advertised their occupational titles, their geographical mobility, membership in occupational associations, and their success as indicated by titles such as *Augustalis*. It is precisely these areas that constituted the loci of identity of these textile artisans and tradesmen.

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1 For earlier discussions, see especially Wipszycka 1965 (on Egypt) and Jones 1974. For more recent works, see, for example, van Minnen 1986, 88–95; Jongman 1988a and 2000; Vicari 2001; Wilson 2001, 271–296 and 2002, 231–274; Alfaro et al. 2004. See Liu 2009, 83–88 for further bibliography.

2 Important place names are marked in Fig. 7.1.

3 Jongman 2000, 190–191, citing, in particular, Morel (1978)'s study of the case of Tarentum.

4 According to SHA Pertinax, 3.3, the father of Pertinax (the emperor in AD 193), a freedman, had a villa in Liguria, and ran a *taberna coactiliaria*, i.e. a workshop for fulling and/or felting. Pertinax himself expanded the business by acquiring a great deal of land, and surrounding the old workshop with more buildings. [‘(Pertinax) *iussus est praeterea statim a Perenni in Liguriam secedere in villam paternam; nam pater eius tabernam coactiliariam in Liguria exercuerat. Sed posteaquam in Liguriam venit, multis agris coemptis tabernam paternam manente forma priore infinitis aedificiis circumdedit; fuitque illic per triennium et mercatus est per suos servos*’]. Stories like this were usually intended to damage the reputation of high-class personages; not to mention that the *Historia Augusta* was highly unreliable as a biographical source (Fik and van Nijf 1992, 71; Vicari 2001, 45). What is important for our purpose is that dynamic and large-scale economic activity in textiles in Liguria was entirely conceivable to the Roman audience.

5 For *gausapa*, also see Pliny, *HN* 8.191, 193.

6 The term *Gallia* is sometimes used to refer to Gallia Narbonensis (Varro *Rust.* 2.4.10; Pliny *HN* 3.34); at other times, to Cisalpine Gaul (Varro *Rust.* 2.4.11; Polyb. 2.15; Strab. 5.1.12); in Martial, it often means *Gallia togata*.

7 Mart. 14.128: *Bardocucullus: Gallia Santonico vestit te bardocucullo. Cercopithecorum paenula nuper erat*; 14.152: *Gausapum Quadratum: Lodices mittet docti tibi terra Catulli: nos Helicaonia de regione sumus*; 14.143: *Tunicae Patavinae: Vellera consumunt Patavinae multa trilices, et pingues tunicas serra secare potest*; 14.145: *Paenula Gausapina: is mihi candor inest, villorum gratia tanta, ut me vel media sumere messe velis*. Also see Mart. 14.147, 152.

8 Colum. 7. 2. 3; for the high quality (softness) of the wool from Mutina, see also Strab. 5.1.12.

9 Cf. Morel 1978, 103 on expressions such as *tarentinum pecus* and *tarantinidion*. Also, the so-called Syrian coats may have been produced in Egypt. (*P.Oxy.* LXIV. 4434; *P. Lips.* I. 57); however, see Vicari 2001, 49, who emphasizes that the evidence from Martial was in line with that from Strabo and Pliny.

10 Brixia: *CIL* V. 4501 = *InscrIt.* 10.5.294 = *ILS* 7290a (*lanari(i) pectinar(ii) sodales*); *InscrIt.* 10.5.875 = *AE* 1927.100; *CIL* V. 4504 = *InscrIt.* 10.5.933, and *CIL* V. 4505 = *InscrIt.* 10.5.297 = *ILS* 7557 [*lanari coa(c)tores*], cf. Tozzi 1971, 152–157; Regium Lepidum: *AE* 1946. 210 [*lanari(i) pect(inarii) et carmin(atores)*]; Altinum: *AE* 1987. 443 [*colleg(iatis) gentilib(us) lanar(iorum) purg(atorum)*]; Brixellum: for a communal burial place of the *lanariorum carminator(um) sodalicium*, see *CIL* XI. 1031 = *ILS* 7290.

11 *AE* 1946. 210: *C(aio) Pomponio / Rufi lib(erto) / Felici / Vlvir(o) Aug(ustali) / Claud(iali) / lanari pect(inarii) / et carmin(atores) / ob merita eius / quod testamento / suo legaverit / eis non sufficientib(us) / sibi donationes et / vestiarium quoq(ue) / et si qui(s) defunctus / esset certa summa / funeretur*.

12 *CIL* V. 4501 = *InscrIt.* 10.5.294 = *ILS* 7290a : *Accepto Chiae / servo / lanari(i) pectinar(ii) / sodales posuer(unt)*.

13 *AE* 1987. 443: *P(ublius) Paetinius P(ubli) l(ibertus) / Aptus sibi / et Attiae Peregrinae uxori / et colleg(iatis) gentilib(us) lanar(iorum) purg(atorum) / in front(e) p(edes) XXXXV ret(ro) p(edes) XVIII / v(ivus) f(ecit)*. For other references to wool workers, see Buonopane 2003, 285–291.

14 Most tombs are in the range of between 300–500 ft². Some of the smaller tombs are: 24 (= 3

- × 8) ft² (AE 1981. 419), 150 (= 5 × 30) ft² (AE 1981. 418); some of the larger tombs are: 900 (= 15 × 60) ft² (AE 2005. 562), 1000 (= 25 × 40) ft² (AE 2005. 572), 8,000 (= 100 × 80) ft² (AE 1974. 337). The status of the tomb owners was usually not marked.
- 15 *Atici / (lana) arge(n)tea // p(ondo) XIIIX / v(ellera) XLII L(ucius) Vinu(---) / Pro(---) lac(erna?) // p(ondo) III / ga(usa)pa XX; P(ondo) IX / (lana) d(ibapha) XXX // p(ondo) IV / XIV [v]ello.* (Bizzarin 2005, 121–135; AE 2005. 615–617, now in the National Archeological Museum of Altino).
- 16 *CIL XI. 862 = ILS 7559 (Mutina/Modena): D(is) M(anibus) / Q(uinto) Alfidio / Q(uinto) l(iberto) Hylae / Vivir(o) Foro Sem/proni(i) colleg(ium) harena/riorum Romae negot/iant(i) lanario / Alfidia Severa pat/[ri] pientissimo.*
- 17 *CIL VI. 9962 = CIL VI. 21053 = AE 1979. 75: M(arcus) Licinius M(arci) l(ibertus) Laetus / vestiarius N[a] rbone[n(sis)].*
- 18 See also *T.Vindol.* 255 and 154; AE 2006. 1827.
- 19 As an outer cloak, the *sagum/sagus* was part of the basic costume for civilians and soldiers alike. According to *Dig.* 34.2.23.2 (Ulpian 44 *ad sab.*), *saga* belonged to *vestimenta virilia* and *familiarica*, suitable for adult males and slaves, but not for women or children (*puerilia aut muliebria aut communia*). It was Gallic in origin. According to Strabo, the Gallic ‘*sagoi* (sic!)’ were rough and flocky. In Martial, *saga* was used almost as a synonym for low-quality clothing. However, *saga* must have ranged in quality, since all kinds of people wore them. Indeed, in Diocletian’s list, the price of *saga* ranged from 500 to 8,000 denarii.
- 20 *CIL V. 5925 = ILS 7578, negotiatori sagario ex Apulia* (cf. Morel 1978, 106); *CIL V. 5929 = ILS 7579, negotiatori sagario, civi Mediomatrici* (Fik and van Nijf 1992, 106).
- 21 *CIL IX. 5752 = ILS 7582*, first half of the 1st century AD.
- 22 AE 2000. 632: {*D(is) M(anibus)*} / *D(is) M(anibus) / L(uci) Luperci Exessi(?) Vivir(i) Aug(ustalis) / civit(ate) Helvetiorum negoti/atoris vestiar(i) Cisalpini et Trans/alpini qui leg(avit) i(n) m(unicipio) N(ovariensium) HS X[---] n(ummum).* Mennella 2003, 391–392.
- 23 *CIL V. 324 = InscrIt. 10.3.200: C(aius) Valerius / Priscus / vestiarius / Aquileiensis / dedit.*
- 24 *CIL XI. 6839 = ILS 6668: V(ivus) f(ecit) / L(ucius) Ursius / Sosander / vestiar(ius) Bonon(iensis) / sibi et Rufrae / Calybe con[i]lugi / piissim[a]e / isdem domo / Cremona Vivir / in front(e) p(edes) XXV / in agro p(edes) XXV.*
- 25 *CIL XIII. 542: Deo Invict(o) Sex(tus) Vervic(ius) / Eutyches / vestiar(ius) civ(itatis) / Trev(erorum) pater.*
- 26 *CIL XII. 3202: D(is) M(anibus) / IIIIVir(o) Aug(ustali) / Q(uinto) Aurelio / Hermae / vestiar(io) Ital(ico) / IIIIViri Aug(ustales) / Politicus / Phoebeus / Restitutus lib(erti) / et Syntyche lib(erta).*
- 27 *CIL XII.1898: D(is) M(anibus) | et quieti per[pe]tuae C(ai) Ruson[i] | Secundi, (se)vir(i) [Aug(ustalis)] | c(oloniae) C(opiae) C(laudiae) Aug(ustae) Lug(udunensis), ite[m] | sagario (sic), C(aius) Ruson[ius] | Myron, (se) vir A[ug(ustalis)] | Lug(uduni) honoratus, ite[m] | centonarius ho[no]ratus et sagarius [cor]poratus, collibe[rto] bonorum exemp[lorum] | erga me, heres ex [jus] su eius solus pos[ui] | et | sub ascia de[di]cavi.*
- 28 Strab. 4.1.2, 14; Ptolemy 2.9; *PECS*: 4886 Vienna.
- 29 *CIL XII. 1928 = ILS 7583 = ILN 5.1.120* (most likely from the late 1st century and early 2nd century AD): *D(is) M(anibus) / P(ubli) Vetti Gemelli | sagari Romanens(is) | vixit ann(is) XXI | mensibus VIII d(iebus) X | P(ublius) Vettius | Profuturus filio / pientissimo | sit tibi terra | levis.* For the meaning of *Romanensis*, see Waltzing III: 685–686, *ad CIL XI 3936*. *Romanensis* may indicate ‘from Rome’, but could also mean ‘after the Roman fashion’.
- 30 For the connection between Lugdunum and Treverorum, for example, see *CIL XIII. 1911, 2029, 2033, 11179*.
- 31 Textiles in the Roman west reflect a preponderance of generalized medium fleeces (Oleson 2008, 467).
- 32 De Ruyt 2001, 190, on the basis of large *fullonicae* just on the right bank of the river.
- 33 *Canusinae rufae: Roma magis fuscis vestitur, Gallia rufis; et placet hic pueris militibusque color* (Mart. 14.129).
- 34 *CIL V. 2864 = ILS 5406: M(arcus) Iunius | Sabinus, | IIIIVir aedili[ciae] potestat(is) | e lege Iulia | municipali, | patronus | collegi cen[tonariorum], | frontem templi | vervis et hermis | marmoreis pe[cunia] sua orna[vit] et tuition(i) | dedit (sestertium duo milia). | N. CCXXXIII.*
- 35 For these aspects, see Waltzing, *passim*; van Nijf 1997, *passim*; Liu 2009, 213–278.
- 36 E.g., *CIL XIV. 2112 = ILS 7212* (AD 136).

- ³⁷ Hawkins 2006; Monson 2006; for comments, see Liu 2009, 18–24.
- ³⁸ Rosser 1994, 430–446; 1997, 3–31; Epstein 1998; Munro 2000, 410.
- ³⁹ The Medieval craft guilds may even be fined for fixing prices: “In Italy the statutes of many city-states contained clauses forbidding any ‘combinations’ formed for the purpose of increasing or decreasing prices, and in Florence especially legislation of 1293 and later prohibited all ‘conspiracies, monopolies, leagues, or pacts which aimed to manipulate prices’” (Wood 2002, 142).
- ⁴⁰ *CIL* VI. 339 = *CIL* VI. 30741 = *ILS* 7315: *Herculi sacrum / Sextus Aufidius Threp[t]us / M(arcus) Octavius Carpus / cur(atores) / collegi(i) Herculis Salutaris / c(o)h(ortis) primae sagario/rum d(onum) d(e) s(uo) d(ant)*.
- ⁴¹ *AE* 1916. 45; *AE* 1920. 69–70; *AE* 1966. 277; *ILLPRON* nos 1450–1458; *RIS* 149 *AE* 1983. 731; Wedenig 1997, 224–29 S 25.
- ⁴² “Several other areas of supply are missing from this collection, notably textiles and leather (including manufactured clothes and footwear)” (Mattingly 2007, 220).
- ⁴³ Munro 1999, esp. 21–22; Munro 2000. *Contra* Jongman 2000, 189: “Medieval textile exports were of better qualities only”.
- ⁴⁴ Munro 2000, 421–423. The wars and conflicts included, among others, the Guelph-Ghibelline Wars (1313–1343), the civil war within southern Habsburg Germany, the Hundred Years’ War between England and France, the Anglo-Scottish and Franco-Flemish wars (to 1319), and the Flemish civil wars (1323–1328).

8. Textile Trade in the *Periplus of the Erythraean Sea*

Manuel Albaladejo Vivero

The *Periplus of the Erythraean Sea (PME)* is a text belonging to the periplus ('a sailing around') genre which was written around the middle of the 1st century AD¹ in *koinè* Greek by a trader or shipowner living in Roman Egypt.² The work has reached us in its entirety. Despite various studies suggesting that it is of limited literary value,³ the text undeniably constitutes a major source of information on matters such as the various maritime routes employed to sail the Indian Ocean region, the navigation calendar, and trading practices in the ports. Furthermore, it sheds light on the impact that the incorporation of Egypt into the Roman Empire had on the exchange of goods, and, more concretely, provides information on the main commercial ports of the time and the commodities obtained or exchanged therein.⁴

The text is divided into 66 short chapters containing information on the three main commercial areas: a) East Africa from Trôgodytikê to Tanzania, b) Arabia and the Persian Gulf and c) India and the Far East. In spite of this division, the part referring to India encompasses almost half the work, which is not surprising, bearing in mind the impact that the increase in trade with this region had on Rome of the High Empire due to the great demand for exotic products – especially spices and pearls, but also cloth – by the higher strata of Roman society.⁵

There were also other factors that contributed to this spectacular development of trade across the Indian Ocean, such as the discovery by the Greek sailors of the monsoon regime, which may have occurred during the Ptolemaic period,⁶ and the geopolitical situation at that time, when the Roman Empire co-existed with various vassal states in the Orient – such as the Nabateans, Palmyra and the Parthian Empire in Central Asia – and had trade and diplomatic relations with the Kushan Empire in northern India and the Han Dynasty in China.

Here, it must be pointed out that while the famous Silk Roads may have been the natural way for channelling the traffic of people and goods from the eastern Mediterranean to the capital of China, Xian, the high taxes which the Parthian administration levied on the goods crossing its territory prevented the Roman Empire from obtaining exotic products via this route. The solution found by the Romans to supply themselves with the goods so anxiously sought after in Rome, was to take advantage of the maritime route via the Indian Ocean,⁷ even though in places such as Leukè Kome (*PME* 19; Sidebotham 1986, 105–107) in Arabia and Alexandria in Egypt a substantial tax of 25% was levied on imported goods.

The items most commonly imported by Rome from the various territories

described in the *Periplus of the Erythraean Sea* were ivory from Africa, incense from Arabia, pepper and other spices from India and silk from China. To this list, cotton from India may be added.

Considering these regions separately, it can be seen, in the first place, that in East Africa – an area which the author of the *Periplus* knew well, probably from having travelled frequently to the Zanzibar region – there was a strong demand for textiles and garments, primarily from the workshops in Roman Egypt. Specifically, in the region of Adulis and Axum (*PME* 6), in present-day Eritrea and Ethiopia, there was a demand for wraps, *stolai* (Daremberg et al. 1918, 1521–1522; Cleland et al. 2007, 182) and garments produced at Arsinoë, in El Fayum,⁸ known for the production of linen fabric (Casson 1989, 111). Further highly sought items were false-coloured *abollai*, which consisted of thick woollen cloaks (Daremberg and Saglio 1877, 9; Cleland et al. 2007, 1), possibly dyed, hence the adjective “false”,⁹ and linen scarves, double-fringed fabric and *gaunakai*, which were thick cloaks of Persian or Babylonian origin that were worn by various peoples in antiquity because of their usefulness.

However, Roman Egypt was not the only foreign supplier of textiles and garments destined for the markets of Adulis and Axum. These places also imported textiles from Ariake, a region in northwest India. Specifically, these were cotton tunics such as the *monache*, which consisted of a single wide piece of cloth, *sagmatogena*, possibly made of coarse cotton, belts, *gaunakai* again, *molochina* (Daremberg and Saglio 1910, 1963) or mallow cloth, fine muslin fabrics and lac dye.

At other ports in the Horn of Africa (*PME* 8–10), such as Malaô,¹⁰ Mundu¹¹ and Mosyllon,¹² there was a strong demand for tunics and sackcloth – *sagoi*¹³ – made in Arsinoë of coarse wool, both combed and dyed. A key region in the development of trade between the Roman Empire and India was the south of the Arabian Peninsula, especially the area known as *Eudaimôn Arabia* around the Gulf of Aden, which functioned as a meeting point and a place for storing goods, many of which represented merchandise being taken by Arab traders to India. The main ports in southern Arabia were Muza (identified as Al Mukha – Mocha) and Kanê (present-day Qana), both now in the Republic of Yemen. It was from the latter port that the crossing to India was made, the ships sailing from there going to Lymirikê, on the Malabar Coast. In the town of Muza (*PME* 24), which lacked a real harbour, but was an *emporion* or trading port, there was a demand for purple cloth, both fine and coarse; garments in the Arabian style, with sleeves (Casson 1989, 152), plain, ordinary, embroidered, or interwoven with gold; woollen fabrics; *abollai*; blankets and, finally, belts with dark stripes. In addition, the town imported saffron, which was not only used as a condiment, but was employed in perfumery and medicine as a yellow dye (Orth 1920, 1728–1731; Cleland et al. 2007, 163). For its part, Kanê imported large quantities of various types of Arab garments, both plain and printed (*PME* 28).

A curious feature which has been highlighted by commentators on this work is that the *Periplus* hardly contains any information about Persia and its area of influence (Belfiore 2004, 69, 73, 74). The author confined himself to stating that the Strait of Hormuz measures 600 stadia (about 110 km) and, thereafter provided a summarised description of the region of Carmania, where the factory of Omana (*PME* 36–37) – identified either as Chah Bahar, with a good harbour at the mouth

of a small bay, or as Tiz, situated at the far end of this bay (Casson 1989, 180–181; Belfiore 2004, 178 n.207) – was located. Purple textiles and garments made in the local workshops were exported from Omana to Arabia and Barygaza in India.

Due to its size and the variety of objects traded, India was the principal destination of the traffic across the Erythraean Sea. The author of the work describes this subcontinent starting out from the Indus River and gives the impression of having a profound knowledge of its west coast. India's ports were mostly located on the rivers and, as a general rule, the merchant ships anchored in a nearby roadstead, using lighters to load and unload cargo.

In view of the enormous length of the Indian littoral and the large number of production centres inland, the country had various regional characteristics. Thus, in the northwest of India there were the ports of Barbaricum, or Barbarikê, and Barygaza.¹⁴ These two enclaves were trading ports. The former name seems to be the Hellenised form of Bahardipur, situated near Shahbandar, although the shifting nature of the Indus estuary has prevented it from being identified more conclusively (Casson 1989, 188; Belfiore 2004, 180 n. 228). Barygaza, on the other hand, can be more easily identified as Broach (Bharuch), since it is in the Gulf of Cambay (Khambhat), very near the mouth of the river Narmada (Sidebotham 1986, 24, 26, 31, 101; Casson 1989, 199–200).

The ships arriving from Roman Egypt would drop anchor at Barbaricum-Barbarikê, but their cargo was transported upriver to the capital where the king of that region lived. In this *emporion*, there was a strong demand for unadorned garments, as well as printed textiles and fabric of various colours. This latter category of objects was an Egyptian speciality and it appears they were much in demand in India, as they were also imported to Muziris and Nelkynda (*PME* 56; Sidebotham 1986, 23–24). In turn, cloth, silk yarn, indigo dye and Chinese hides were exported from Barbaricum-Barbarikê.¹⁵

In the *Periplus*, Barygaza is described as importing various types of garments, plain and printed, and bright-coloured girdles of a cubit (about 44 cm) width, while the king demanded expensive, unadorned garments. This mention of a monarch should be understood as referring to the Indo-Parthian sovereign of the region called Scythia by the peoples of Greek culture. This area corresponds to present-day southern Rajasthan with its capital at Minnagar. The port of Barygaza was Scythia's main point of contact with the outside world. Through this port was exported the area's textile output,¹⁶ which must have been extremely varied: Indian muslin (*sindon*),¹⁷ garments of *molochinon* (Daremborg and Saglio 1910, 1963), as well as silk fabrics and yarn brought overland from China by the Bactrian route (Belfiore 2004, 54).

On the other hand, the southwest coast of India, also called the Malabar Coast and, in the *Periplus*, Limyrikê, had other subregional features. Here, western traders obtained pepper, the spice *malabathron*, precious stones, pearls, ivory, tortoise shells and fine cloth.

The most important of the Malabar ports was Muziris, probably the present-day town of Cranganur, near the estuary of the river Peritar, in the state of Cochin. Muziris may have contained a Roman community,¹⁸ as in segment 12 of the *Tabula Peutingeriana* there appears a temple dedicated to Augustus.¹⁹

The Malabar *emporion* belonged politically to the kingdom of Kerala and in the *Periplus* a certain Kêprobotos is mentioned as a monarch (*PME* 54).²⁰ In these

emporion, Muziris and Nelkynda,²¹ there was a demand for unadorned garments made from fabrics of different colours. They also imported Chinese textiles, i.e. ones made of silk (*PME* 56). Unlike in the case of Barygaza, Chinese silk was transported by coasters from the mouth of the river Ganges to Muziris and Nelkynda (*PME* 64).²²

Once round Cape Comorin, the author of the *Periplus* ceased providing such reliable information as that available for the west coast of India. Most likely, he had no personal knowledge of either the east coast or the island of Palaisimundu-Taprobânê and, consequently, had no alternative but to fall back on information furnished by other sailors who had travelled to these regions.

In one of the chapters of the work (*PME* 59), a place called the Strand (Aijgialo), situated in a gulf, is mentioned. Inland from this coastal settlement was the region of Argaru, identified as Uraiyur, which today is part of Tiruchirapalli (Trichinopoly). According to the *Periplus*, it was the capital of the kingdom of Chola, one of the three main kingdoms of southern India. This Argaru-Uraiyur undoubtedly had contact with the Mediterranean world, as fragments of Roman pottery have been found there (*PME* 59). From Argaru were exported *sindones* and fine cotton cloth called *Argaritides*.

An element that stands out from the scant information the author offered about the island of Palaisimundu or Taprobânê (*PME* 61)²³ – present-day Sri Lanka – is his ignorance of the island's size, as he thought it ran from east to west as far as Somalia. He also provided a short list of products that were exported from it, foremost among which are the *sindones*.

The next subregion described in the *Periplus* is the one known as *Masalia* (*PME* 62),²⁴ which corresponds in general to the southern part of the Gulf of Bengal. The author described it in broad terms, but lingered to comment on some of the fantastic peoples that were said to populate it. These included the barbarian *Kirraðai*²⁵ and the *Hippioprosopoi*,²⁶ of whom, apart from having horses' heads, it was said that they were cannibals. Enormous quantities of *sindones* were produced in this area.

In the area of the Ganges (*PME* 63), near present-day Kolkatta,²⁷ there was an important trading port also called Ganges, from which Indian *sindones* of the very finest quality, the so-called Gangetic, were exported. It is quite possible that on this occasion the author of the *Periplus* was referring to Bengali muslin, which was highly valued.²⁸

Mention has already been made of the importance of textiles within the lists of traded goods cited in the *Periplus of the Erythraean Sea*. After Egypt was annexed by Rome in 30 BC, the Red Sea and the Indian Ocean became two areas of intense Roman expansion. As a result of this, textiles from the Egyptian, African, Indian and even Chinese workshops could be traded over long distances during the entire period of the Julio-Claudian dynasty until the austerity measures adopted by Vespasian and the Senate of that time²⁹ had a negative effect on the import of luxury textiles by the Roman aristocracy. However, for the approximately 80 years that this trade was in full flow, exotic textiles and garments flooded parts of the Roman markets resulting in changes in fashion and taste within the highest echelons of this society.

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¹ The exact date of writing is uncertain. Although the dates proposed by scholars range between 50 BC and the first half of the 3rd century AD, indications in the text support the hypothesis of it having been written in the mid-1st century AD (De Romanis 1996, 37; Belfiore 2004, 77–82). This was a period of expansion in the Roman Empire, with good political, economic and social conditions promoting long-distance commercial activities. It is preserved in the 10th-century AD *Codex Palatinus Graecus* 398 (ff. 40v–54v) at the Universitätsbibliothek in Heidelberg. The definitive text was established by Hjalmar Frisk in 1927. The most recent editions are that of

- Belfiore 2004, along with the review of J. Desanges in http://www.siff.us.es/historiarum_reliquiae/Rev_Desanges.html and, above all, that of Casson 1989. See also González Ponce 1992, 237–245. For places mentioned in text see Map III.
- 2 The author wrote in *PME* 29: “the trees we have in Egypt”, while on other occasions – 6, 14, 24, 39, 49, 56 – he mentions the Egyptian calendar months.
- 3 Among others, that was the opinion of Schoff 1974 (= 1912), 7–16.
- 4 As was pointed out by Casson 1989, 9, in several chapters the author also included information more related to anthropology and natural history than to commerce.
- 5 Pliny the Elder’s lamentation about the 50 millions sesterces per annum which Rome paid for its commerce with India is well known (*NH* VI, 101). The data offered by Strabo II, 5, 12 and XVII, 1, 13 about the 120 merchant ships which annually left the Egyptian harbour of Myos Hormos in Augustan times are no less famous. This is in contrast to Ptolemaic times when only up to 20 ships may have annually sailed the route between Egypt and India.
- 6 *PME* 57 recorded the news of a certain steersman named Hippalus, who discovered the way to reach India making the most of the south-eastern monsoon. The present author has edited the ancient texts on Hippalus in *Die Fragmente der griechischen Historiker V. Die Geographen*, under the number 2211. In the opinion of many scholars, the first Greek seafarer to reach India was Eudoxus of Cyzicus in 118/116 BC, as reported by Strabo II, 3, 4–5. However, in my opinion, the veracity of his testimony is doubtful. See Berger 1903, 573; Jacoby 1907, 930; Cary and Warmington 1929, 71, 101; Desanges 1978, 151–164; Mazzarino 1982/1987, VII–XIV; Amioti 2004, 112–116.
- 7 Sidebotham 1986, 8, suggested that the people of Southern Arabia must have known and used the summer monsoon. This wind blows from the southwest making it suitable to sail to India, but it is doubtful whether the knowledge of this phenomenon was only within the purview of western traders, above all the Egyptian Greeks, who frequently sailed to the harbours of Southern Arabia. About the monsoon regime, see Casson 1980, 21–36.
- 8 Previously the name of this city had been Krokodilopolis.
- 9 *Nothos* (νόθος) in the original text (*PME* 28).
- 10 It must be identified with present-day Berbera, in Somalia. Casson 1989, 120.
- 11 It is probably present-day Heis. Chittick 1979, 273–277.
- 12 It is very difficult to identify this place. Suggestions have been made locating it in the vicinity of Bur Gaban, Bender Cassim, Elayu or even Candala. See the discussion in Casson 1989, 127–128.
- 13 Daremberg et al. 1918, 1008–1009; Cleland et al. 2007, 164.
- 14 *PME* 38, 39, 41, 48, 49. In 38 “Barbarikon” is mentioned, but in 39 this name is changed into “Barbarikê”.
- 15 Solid indigo colour is more black than blue. In antiquity, indigo was not only used as a colouring agent but also as a drug; Casson 1989, 194–195.
- 16 The majority of it was produced in the neighbouring city of Ozênê (present-day Ujjain), in the Indian state of Madhya Pradesh; *PME* 48.
- 17 Daremberg et al. 1918, 1346; Cleland et al. 2007, 171; the term can refer both to fine cotton and linen garments. In the case of India, they would be those made of wild cotton.
- 18 Muziris was also mentioned by Plin., *HN* VI, 104, as the first Indian port of call for those ships that had set sail from Okelis or Kanê with the help of the monsoon winds. In contrast to the information provided in *PME*, Pliny wrote that in Muziris, there were few goods. See also the studies on *P. Vindob. G. 40822*: Harrauer and Sijpesteijn 1985, 124–155; Casson 1986, 73–79; Casson 1990, 195–206; Thür 1987, 229–245.
- 19 Wheeler 1954, 160, quoted a Tamil text from the 1st century BC, called *Akananuru*, where it was written that *Yavanar*’s ships – “Ionians” or westerners in general – arrived in wealthy Muziris, where they exchanged gold for pepper.
- 20 Kēprobotos would be the Greek transposition of the name Keralaputra, which was quoted in one of the Ashokan inscriptions in the mid-3rd century BC; Casson 1989, 217–218.
- 21 There have been several attempts to identify Nelkynda. This place, probably present-day Niranom, was in the hinterland and its harbour was that of Bakarê; see the discussion in Casson 1989, 297–298.
- 22 The text indicates that silk floss, yarn and cloth came from a distant and huge city called Thina. This place name evidently comes from Ch’in, the name of the dynasty which unified China

in the 3rd century BC. From there, some goods were carried to Barygaza through Bactria and some others to Limyrikê along the Ganges River.

²³ Ptol., *Geog.* VII, 4, 1, gave another list of exported goods which differs from that of the *Periplus*; see De Romanis 1988, 5–88; Faller 2000.

²⁴ Ptol., *Geog.* VII, 1, 15, named it *Maisôlia*. It may be identified with present-day Masulipatam.

²⁵ It seems that this name grouped all the Mongoloid peoples settled in Northern and Eastern India; Casson 1989, 234.

²⁶ In Indian literature there are several tales about horse-faced peoples; Schoff 1974, 254; Casson 1989, 234; Karttunen 1997, 158n.

²⁷ Precisely in the place of present-day Tamluk.

²⁸ Majumdar 1973, 177, wrote that Bengali muslin was appreciated all over the world and its main manufacturing centre was in Dacca.

²⁹ Tacit., *Ann.* III, 55. On *adstrictus mos* see De Romanis 1996, 258; Sidebotham 1986, 144.

9. Textiles and their Merchants in Rome's Eastern Trade

Kerstin Droß-Krüpe

Strabo the geographer wrote about the trade between the Roman Empire and regions in the East, which was very important in his time. In his *Geographika*, he wrote of the trade with India: "At any rate, when Gallus was prefect of Egypt [i.e. 26–24 BC] ... I learned that as many as one hundred and twenty vessels were sailing from Myos Hormos to India" (Strabo 2.5.12).

Pliny the Elder also addressed the topic of Rome's trade with the East in his opus *Naturalis Historia*. When describing the Indian subcontinent, he comments that India earned an annual amount of 50 million sesterces in exchange for goods that were sold for a hundred times more (Plin. *NH* 6.101). On another occasion, he wrote about the same topic, doubling the initial amount: "... according to the smallest estimation, India, the Serer people, and the peninsula [i.e. Arabia] draw an annual amount of 100 million sesterces from our Empire" (Plin. *NH* 12.84).

Even if there is a certain exaggeration in Pliny's numbers, his assertions about the Eastern trade should not be treated as a pure *topos*, because – as we will see later – documentary sources and the archaeological record confirm the information he presents. The aforementioned excerpts demonstrate two facts: first, the trade between Rome¹ and the East, meaning Arabia, China and India, was significant; and second, textiles were a part of the goods traded.²

There were two main routes of transfer between the Roman Empire and the East. First, the goods were transported by land to Palmyra in Syria, which was connected by the caravans with Mesopotamia and Arabia (Drexhage 1982, 17–34; Teixidor 1984; Schmidt-Colinet 1997). Its geographical location gave Palmyra the advantageous position as a centre of distribution for goods that were transferred to the ports of Syria and finally into the Roman Empire. Archaeological data attest that Chinese silk constituted an important good in this trade (Stauffer 1995, 57–71; 1996, 425–430; on the silk trade cf. Thorley 1971, 71–80).

The other trade route with Arabia and India went through Egypt and the adjacent Red Sea to the sea routes of the East. Starting in Alexandria, the main route followed the Nile up to Koptos. There, it split up into two different land routes: one of them took six or seven days in the eastern direction to Myos Hormos. The other one took 12 days to Berenike further south (Plin. *NH* 6.102–103). The caravans used more or less fixed routes that should not be imagined as constructed roads but rather as tracks in the desert with stone signs indicating the right direction placed at more or less regular distances. These routes ended in the ports of Myos Hormos and Berenike which were central points of interest in

Roman trade with Arabia and India.

The documentary tradition from Egypt is used in the following to shed light on the structures and agents of trade between Rome and the East via Egypt and to clarify the extent to which textiles were a part of this exchange of goods. The *Periplus Maris Erythraei* (*PME*)³ provides particular insight into the exchange of goods between the Roman Empire and the East. It is a unique description of trade routes meant as a manual and 'sea itinerary' for merchants based in Egypt who were trading with the East. It was written in the middle of the 1st century AD. In contrast to other *periplus*, which describe coastal sea routes, the *PME* concentrates not only on routes and distances, but also mentions the specific trading conditions for the ports of trade shown (ἐμπόριον). This is expanded by lists of export and import goods of the main ports and the connected locations in the interior. The inventory of goods traded from Rome to the East at the main ports includes up to thirty products. These include spices, jewels and ivory. Apart from the goods, other important information such as the best times for travel and dangers like piracy were recorded. Thus, the *PME* is one of the central documents that sheds light on the Roman economy in the early Principate.

The *PME* lists textiles as articles for export and import alike. Items of clothing of various kinds and qualities are listed 25 times among the exported goods from Egyptian ports. Garments that are imported to Egypt are mentioned 14 times. Furthermore, there are 11 mentions of garments that were traded from India, Arabia and Persia, but not meant to be sent to Egypt but rather to other regions (for the precious coloured and decorated fabrics in the *PME*, cf. Mossakowska 2000, 289–318). Two observations may be made here: first, it was not only luxury textiles that were traded, although silk and purple textiles are listed (e.g. § 24: πορφύρα διάφορος). The goods that were exported from Egypt were mostly of average quality and most of the goods that were imported were not marked as precious either. Second, it seems that many of the clothes that were imported were made of cotton. The question arises whether these assertions are consistent with the archaeological finds from the Egyptian ports; and how they fit with the structure of the Red Sea trade in general.

The importance of the seaports of Myos Hormos and Berenike when it comes to the distribution of goods across the Erythrean Sea has already been mentioned above.⁴ At both locations, many and varied textiles have been found, indicating that this type of merchandise must have constituted an important part of the goods traded there.⁵

Thousands of textile fragments have been found in Berenike. These are not presented in detail here; rather they are placed into the context of the economics of Red Sea trade. Especially the textiles from a midden, which can be dated to the 1st century AD, are noteworthy due to the fact that many of these fragments are made of cotton that is almost exclusively z-spun (Wild 2006, 175–184 and Wild and Wild 2007a, 225–227). John Peter Wild was able to demonstrate that the z-spun cloth was most probably imported from India (Wild 1997, 287–298; Wild and Wild 2007b, 211–220; concerning the import of Indian cotton cf. Casson 1989, 17). Cotton was also prominent among many textile fragments found in Myos Hormos (Brookner 1979; Eastwood 1980, 262, 300–317). However, these fragments were not of high quality, but rather ordinary textiles. The papyrological findings from imperial Egypt mention cotton rarely and assert only once that it

was harvested in Egypt (cf. Winter and Youtie 1944, 249–258). The term ἐρεόξυλον or ἐριόξυλον is used to denote cotton in a list of premises in Oasis Magna (Kharga Oasis) that also names the goods produced by the local rural estates (P. Jand. 7/142). Another, highly fragmented papyrus of unknown origin from the 3rd century AD (P. Lond. 3/928, p. 190 [with BL I, S. 288]) lists goods that were liable to customs duty with the respective sums of money demanded. Cotton is the first item on the list, but regrettably the sum that was paid is lost on the fragment. In addition, three private letters of unknown origin from the 2nd century AD mention garments made of cotton (SB 6/9025, SB 6/9026 and P. Mich. 8/500).⁶ According to these documents, cotton must have been considered a material that was not too expensive to be used for ordinary clothing. Thus, cotton cannot be seen as a luxury good. It has to be emphasised that there is only one single reference to cotton that is grown in imperial Egypt, while it has been found in the major ports of the Red Sea and is also mentioned in the *PME* as an imported good from India. Thus, the case of cotton can be used as an example of archaeological finds supporting written records. The cotton fragments found in Myos Hormos and Berenike clearly correspond with the written sources: cotton textiles constituted an important part in eastern trade and were not necessarily seen as luxury goods.

Fragments of a contract from the papyrus collection in Vienna shed light on the inner structure of trade transactions between India and Rome (SB 16/13167 = P. Vindob.G.40.822; cf. Seland 2007, 69–82). The recto of the document, which can be dated to the 2nd century AD, records a business transaction connected to a trading trip to the South Indian town of Muziris. This trade agreement was concluded between a merchant (ἐμπορος) and his creditor. The ἐμπορος⁷ had connections to Muziris and dared to venture overseas to India via the Red Sea. His business partner provided him with an immense amount of money for this journey. The goods that would be obtained in Muziris, served as security for this sum. Trying to cut down the risk, the ἐμπορος submitted to the regulations imposed by his creditor on the means of transportation, travel route and other safety precautions. The attached goods were to be held ready for the creditor, however, the customs duty of 25% of the merchandise value was a serious concern. The high rate that had to be paid on the goods imported to Alexandria shows how lucrative the trade in expensive goods was for the Roman treasury. Thus, India and Arabia did not merely draw a considerable amount of money away from the Empire, as Pliny asserted. The goods from the East also filled the treasury with substantial sums of money. In addition, ostraca (e.g. O. Ber. 46), which have been found in Berenike, prove that goods which were exported were also subject to taxation. The interest of the state – as evidenced in the Vienna papyrus – took a higher priority over the interests of the merchant and the other parties involved, and had to be satisfied first.

However, let us return to the content of the Vienna papyrus: Its verso also provides unique information about the eastern trade. There, the ἐμπορος listed his imported goods – probably for the customs office. The items were sorted according to their category and their weight. His freight consisted of 3.5 tons of nard, which is a fragrant flower that served as the basis for precious oil,⁸ paper, ivory and possibly cloth. During a revision of this document, Frederico Morelli (2011) proposed a new interpretation of the term σχιδαί. He suggests the term means

elephant tusks rather than textiles (cf. Morelli 2011, 221–222). The value of the goods is also mentioned, because it was important for the calculation of the customs duties. The total price of the goods was 1,154 talents and 2,852 drachmae, resulting in almost seven million drachmae. The papyrus also mentions that the goods constituted only six parcels of the freight; thus, they must also have transported an unknown amount of other goods that probably belonged to another ἔμπορος. Moreover, it is important to note that the customs duty on these goods was due in Alexandria, because the ἔμπορος was able to sell the goods there and pay off his creditor. The text demonstrates the complexity of such transactions as well as the high value of the goods and the possible profit. Comparing the nearly seven million drachmae that our ἔμπορος imported in the form of goods from India with the annual living costs of an adult in Egypt at that time,⁹ it may be concluded that more than 30,000 people or 6,350 families could have lived off that money. The sum that our papyrus mentions for the transport from the port through the eastern desert is 170 talents and 50 drachmae. This amounts to 1,020,050 drachmae – a sum which would be enough to support 4,500 people for a year.

Thus, the question arises about the kind of people who were involved in the trade on the Erythrean Sea. Who were the merchants acting in the lucrative field of eastern trade? The anonymous author of the *PME* was probably a ναύκληρος (a term that can roughly be translated as ‘shipowner’) or an ἔμπορος (merchant), who travelled the routes himself and thus was able to describe the locations and goods from his own experience. Several indicators in the text suggest that the author was a native of Alexandria and can thus be identified as a Greco-Egyptian (Dihle 1965, 9–31; Casson 1989, 7–10).

Other merchants who earned their living from the transfer of goods from the East can be investigated further with the sources at our disposition. Ναύκληροι and ἔμποροι who traded on the Erythrean Sea based in Egypt are recorded in several inscriptions from the 2nd and 3rd centuries AD.

An inscription from the 2nd or 3rd century AD, which was found in Médamoud near Luxor, is noteworthy (SB 8/703 = SB 5/7539; Jouguet 1931, 1–291; Vélissaropoulos 1980, 115–117). The local temple was the scene of a sacrifice to the goddess Leto performed by Aelia Isidora and Aelia Olympias. Both women refer to themselves as ματρῶναι στολᾶται, which implies their membership of the local aristocracy (Jouguet 1931, 10–12). Furthermore, they claim to belong to the ναύκληροι and ἔμποροι of the Erythrean Sea. Apparently, this inscription indicates the presence of female ship owners and merchants trading along the Red Sea. Onomastic arguments indicate that both women originated in the eastern part of the Roman Empire. The mention of the prefect Aelius Apolinarius, whose rank places him in the *ordo equester* or *ordo senatorius*, also supports the women’s connection to the aristocracy.

An inscription found at Koptos stems from the time of Vespasian and is a dedication to the goddesses Isis and Hera (Wagner 1976, 277–281). Hermeros, son of Athenion from Aden, had it built. He is also a merchant in the Erythrean Sea region: Ἐρυθραῖος ἔμπορος (ll. 5–6).¹⁰ At first glance, it seems strange to find a combination of a Greek name with its origin in Aden. It is impossible to discern, however, whether Hermeros was a native of Aden or whether he was an Egyptian or Greek by birth but was raised in Aden (*PME* § 26). This locality also appears in the *PME* by the name of Εὐδαίμων Ἀραβία (“prosperous Arabia”). Here, it is

praised for its suitable harbours and sources of fresh water (*PME* § 26). It appears that Koptos, where both routes to the central ports meet, was not only the transport hub of the region, but also the meeting point of peoples of very different ethnic backgrounds.

This is confirmed by a dedication to Isis by another *ἐμπορος* from Aden found in Koptos, dated several years earlier than the aforementioned inscriptions (Bernand 1984, 189–190, no. 62):

Ἵπερ [Τιβερίου] Κλαυδίου Καίσαρος | Σεβαστοῦ Γερμανικοῦ Αὐτοκράτορος | Ἵσιδι θεᾷ
μεγίστῃ [ἐκ τῆς ἰδίας] | Δα[πάνης] - - - - - Ἀδα[ν] - | ἱτης ἔμπορος ἀνέθηκεν | ἔτους
- - - - - Φαωφί ἱη

For Tiberius Claudius Caesar Augustus Germanicus Imperator to Isis, the greatest goddess, Dapanes, merchant from Aden, dedicated the stele at his own cost..... 18. Phaophi.

Ναύκληροι and *ἐμποροι* who did not come from Egypt but also traded along the Erythrean Sea are undeniably documented in another dedication from Koptos:¹¹

...ΚΤΑΚΤΟΝΑ | υἱὸν Ζαβδαλλιαλμα- | νου καὶ ἀ[πὸ τῶν] Ἀδρια- | νῶν Παλμυρηνῶν |
ναυκλήρων Ἐρυθραίων, | ἀναν[εώσαντα] ἀπὸ θεμελίου | τὸ πρόπυλον [κ]αὶ τὰς
πύλ[ας] | τρεῖς καὶ νεοσυργήσαντα ἐκ κατ- | νῆς τὰ πάντα ἐκ τῶν ἰδίων | αὐτοῦ, φίλου
ἀγαθῇ τύχῃ, [οἱ] | [Α]δριανοὶ Παλμυρηνοὶ | ἔμποροι τὸν φίλον.

(...) son of Zabdallialmanos, one of the Hadrianic Palmyrene Red Sea *naukleroi*, constructed from the foundations the propylon with the three gates and all the new things which he built at his own expense. To the friend's fortune the Hadrianic Palmyrene Merchants built it for their friend.

The inscription originated in a building that was probably used as a trade headquarters. The date cannot be clarified but has to be later than AD 129 (Reinach 1911, 61–65).¹² The patronymic of the benefactor, who was a *ναύκληρος* on the Red Sea, implies a Semitic origin, because the name Zabdallialmanos is not native to Egypt; rather, Zabdalla is a Semitic name (Wuthnow 1930, 46). It is remarkable that *ναύκληροι* and *ἐμποροι* are two separate professions in Palmyra. The benefactor is not a member of both the *ναύκληροι* and *ἐμποροι* – otherwise quite common – but is only called *ναύκληρος*. The *ἐμποροι* are mentioned as his friends at the end of the inscription. Furthermore, the said *ναύκληρος* appears to have owned a great sum of money, although there is no absolute number recorded. This enabled him to appear as a generous benefactor at the temple in Koptos. This is evidence of the economic importance of the eastern trade that is noted by Strabo and Pliny the Elder, because its participants were able to amass great fortunes.

It is, thus, peculiar that the *ναύκληροι* and the *ἐμποροι* of the Red Sea are not mentioned in documents from the seaports, but only from the Egyptian heartland.¹³ This is also the case with the written sources that attest people who travelled from Egypt to India over the Red Sea without calling themselves *ναύκληροι* or *ἐμποροι*. For example, Gaius Numidius Eros left a grafitto on a rock surface in Wadi Menih after his return from India, en route from Koptos to Berenike (Meredith 1953, 39, fig. 14; *AE* 1956, 55; Bernand 1977, no. 64). The cave, which most likely provided shade for the travellers during the day, bears numerous graffiti, most of which are of the simple “I was here” kind. His inscription reads:

The text was written between the 25th February and the 26th March of the year 2 BC. Since Numidius Eros does not provide information about his profession or the reason for his journey, we cannot say whether he was a simple seaman or a merchant. Another Egyptian travelling to India appears in a taxation list from Ptolemais Euergetis written in the second half of the 1st century AD (cf. Kruse 1998, 157–190; 2002, 272–276). Among the 173 names listed, is a 32-year-old man named Gaion Diodoros, who did not appear in person when the taxpayers were registered, because he was in India (SPP IV, pp. 58–83, line 549). It is possible that Gaion was one of the merchants who travelled to India and had to stay there for a while to take advantage of the monsoon winds.¹⁴ His case once again demonstrates that there were trade relations between the heartland of Egypt and India.

The aforementioned documents show clearly that people travelled from Egypt to India and stayed there for a relatively long time period. Another reason apart from economic activities is hard to imagine, because of the financial gains in this business.

It is also possible to demonstrate the presence of people of Indian origin in Roman Egypt. In addition to the speech of Dio Chrysostom,¹⁵ in which he mentions many foreign people in Alexandria around AD 100, there are also relevant documentary sources. For example, there is an ostrakon from Λευκὸς λυμῆν, a seaport on the Red Sea, probably at the eastern exit of Wadi Hammamat on the same altitude as Koptos, possibly the modern day Marsa Koseir el-qadim (cf. Ptol. 4.5.8; Quack 1999, 109), which is inscribed in an Indian language. It contains a list of goods that were probably owned by three Indians named Halāka, Viṇhudata and Nakāda (Salomon 1991, 731–733). The type of inscription – an inventory or stock list – is otherwise not known in India but is very common in the Roman Empire and the Near East (Salomon 1991, 733 with note 11). Thus, a very ‘un-Indian’ document type was written in an Indian language and found in a Red Sea port. It is likely to have belonged to Indians who travelled to Egypt or even lived there and adapted the locally used inventories to their native language. The writing resembles a South Indian variant of Brahmi. The names are also common in that region (Salomon 1991, 733 with note 12).

Two ostraca from Myos Hormos which bear Indian names in the Tamil language were also found. Paleographic reasons lead to the assumption that they originate in the 2nd century AD (Salomon 1991, 734–735). These people also must have come from the southern part of the Indian subcontinent, because the old Tamil language was spoken there.¹⁶ This gives the impression that the Indians who were in Egypt came primarily from southern India (although the *PME* also mentions connections with the north).

Furthermore, Ulrich Wilcken noted a Greek inscription from the temple of Seti I near the caravan route between Berenike and Apollinopolis Magna, modern Edfu (Wilcken 1906, 320). It reads:

ΠΑΝΙΕΥΘΑΣΙ | ΚΑΙΕΠΗΚΟΣΙ | ΣΟΦΩΝΙΝΔΟΣ | ΥΠΕΡΑΥΤΟΥ

To Pan, who gives easy passage and listens to prayers; Sophon the Indian, on his own

behalf.

In contrast to the aforementioned Indians, Sophon used the Greek language. It could be that he was a long-term resident of Egypt, although we cannot prove that. However, it seems he adapted himself not only to the Greek language but also to Mediterranean cults.

On the basis of all these sources, it appears that the inhabitants of the *Mare Erythraeum* region had a high regional mobility that can be explained by the lucrative trade between Rome and India. People from Egypt, India, Palmyra and Aden were active in this sector.¹⁷ However, it can be shown that trade structures were not only confined to Egypt. Merchants based in Italy and Rome were also connected to the Indian trade, possibly via the Erythrean Sea as well.

Returning to textiles traded along these routes, a concrete case of textile trade between the Roman capital and Egypt can be found in a letter from the 2nd century AD, in which an Egypt-based wool merchant (ἐρίεμπορος) asks whether Dioscurus, probably his business partner, returned from the distant capital (P. Fouad. 1/77). One can assume that he had business relations with Rome (cf. Drexhage 1991a, 30).

Other textile materials were also involved in trade networks that go further than merely the Egyptian area. An inscription by Aulus Plutius Epaphroditus from the town of Gabiae (Gabii) in Latium provides more information on this aspect. It can be dated to the 15th May AD 168 (*CIL* XIV 2793 = *ILS* 5449; Weinstock 1955, 923–926; Brandenburger 1967, 219 note 79; Hornbostel-Hüttner 1979, 9–10). It was placed on the front of the local Venus temple and tells us about the financial help that Aulus Plutius Epaphroditus provided for the construction of the building. His profession is given as *sericarius*, which can be translated as a silk merchant.¹⁸ This inscription provides a hint that the textile business was very lucrative. He paid for the entire construction as well as for four statues and a bronze door, and also gave monetary gifts.¹⁹ It is not possible at present to clearly ascertain the routes Plutius used to import his silk into the Roman Empire. The *PME* gives several Indian locations for the silk trade. For example, Muziris, the destination of the merchant mentioned in the Vienna papyrus, is named as a source of silk (§ 56). Nelkynda in South India as well as Barygaza and the Indus Delta are named as exporters of valuable textiles, some of which were from China (§§ 56, 39, 49 und 64). There are some hints of an Indian silk production at that time (Gopal 1961, 42–64), but it is more probable that the Indian ports were used as transit points for Chinese goods (Parker 2008, 156). Thus, silk was not only imported by land through Central Asia and Syria into the Roman Empire, but also via intermediary merchants though India and the Erythrean Sea. Plutius, the Italian *sericarius*, could have imported his goods via Egypt and thus could have been an agent in the Erythrean Sea trade.

The evidence indicates that trade in eastern goods must have been highly lucrative – at least for some of its participants. At the same time, high profit opportunities carried with them high risk. The Vienna papyrus gives an impression of the trade structure, its complexity, the participants and their detailed agreements. Textiles constituted an important part in the transactions of the ναύκληροι and the ἔμποροι on the Erythrean Sea, as confirmed by the *PME*, the dedications from Koptos and the archaeological finds. Eastern trade was not only financially attractive for the merchants, but the Roman state also profited through

import taxes, tolls on roads and the taxes on exported goods.

Regarding the socio-cultural identity of the people who participated in the Erythrean Sea trade, it can be assumed that they were either of Graeco-Egyptian or even Roman-Graeco-Egyptian origin like the author of the *PME* and the two women mentioned in the inscription from Médamoud near Luxor, or they came from Palmyra, Aden or India. The participation of the local elite can surely be assumed, as indicated by the inscription of Aelia Isidora and Aelia Olympias. The large sums of money that were needed for ventures to the East probably came from creditors among the most prosperous part of Alexandrian society or even the senatorial elite of the Empire. After all, some of the eastern trade networks had connections to the Roman capital (Tacoma 2006, 83).

The intercultural contact seemed to have resulted in Indian people writing (or having other people write) Greek texts and adopting characteristic document types, such as inventories, as well as in Egyptians staying in India. This demonstrates regional mobility and cultural exchange, which must have been profitable for both worlds and was based on the actions of merchants that dealt with various luxury goods as well as textiles.

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1 In this text, the term Rome denotes the entire Roman Empire.

2 For places mentioned in text, see Map III.

3 For general reference on Eastern trade, cf. Raschke 1978, 604–1378. For further information on the relations between Rome and India, cf. Parker 2008.

4 The text is preserved in a copy from the 10th century AD, the Heidelberg *Codex Palatinus Graecus*. The main edition of this text is Casson 1989. Cf. Albaladejo in this volume.

5 Concerning the terminology, it has to be stated that even in ancient times there was little consistency in the terms used. The term Erythraean Sea (ἐρυθρὰ θάλασσα) in one instance refers to the Red Sea proper and in others includes the Gulf of Aden and the Persian Gulf or the area stretching as far as the Indian subcontinent; cf. Sidebotham 1986, 182–184. Here, the term ἐρυθρὰ θάλασσα and its English equivalents ‘Erythraean Sea’ and ‘Red Sea’ are understood in its greatest possible extension stretching as far as the Indian Ocean.

6 To avoid any misconceptions, the problem of locating Myos Hormos will be briefly explained. Whereas the port described e.g. by Strabo or Pliny the Elder was at first located at what is now Abū Sha’ar, it is *communis opinio* for researchers today to connect the port to what is now Quseir al-Quadim; cf. Cuvigny 2003, 24–27. Hence, the identification of Quseir al-Quadim with the ancient Leukos Limen is unlikely; cf. Cuvigny 2003, 28–30.

7 SB 6/9025 might originate in Oxyrhynchos or its surroundings; cf. Winter and Youtie 1944, 251.

8 Cf. Drexhage 1991a, 28–46 for the terminology of ἐμπορος, which demonstrates that, with the exception of those ἐμποροι associated with the eastern trade, the Egyptian ἐμποροι do not fit the classic interpretation of a wholesaler, as opposed to the κάπτελοι working as merchants on regional markets, and that neither term permits inferences into socio-economic tendencies and operating range of associated persons.

9 The *PME* mentions spikenard as a trade good from the Indian port of Barbarikon, which is situated at the Indus estuary in present-day Pakistan, § 39.

10 Cf. Drexhage 1991b, 453, who estimates the average annual expenditures in the 2nd century AD as 338.20 drachmas for a single man and 1654.20 drachmas for a family of six persons.

11 Concerning the grammar, the adjective Ἐρυθραῖος could be referring to the preceding toponym, but as Wagner (1976) already suggested, the interpretation as a merchant in the Erythraean Sea is more probable; cf. the phrasing in SB 8/8821.

12 AE 1912, 171. Cf. Reinach 1911, 17, and Bernand 1984, 262–263, no. 103. Bernand’s lecture is also the background of the text cited here and of its translation.

13 Hadrian’s presence is attested by *IGR* III 1954. For the usage of the name affix Ἀδριανή; cf. Boatwright 2000, 105, and Mortensen 2004, 191.

14 The adjective [ἐ]ρυθραῖκός appears in another inscription from Qift in which a βουλευτής is mentioned (SB 5/8821; de Ricci 1902, 450–451, no. 90). Julie Vélissaropoulos proposes to read [ναύκληρος ἐμποροι Ἐρυθραῖκός]. The inscription can be dated to AD 260/261 due to the mentioning of the Usurper Macrianus Minos and Quietus; cf. Vélissaropoulos 1980, 115 note 145. Outside of Qift, the ναύκληροι and ἐμπορος of the Red Sea are attested by a bilingual inscription from the Upper Egyptian Denderah (Tentyris): [τῶν ναυκλήρων] καὶ ἐμπόρων Ἐρυθραίων;

Vélissaropoulos 1980, 115.

¹⁴ Concerning this and the presence of western merchants in Southern India, cf. Karttunen 1995, 81–91. Pliny the Elder (*NH* 6.104. 172) attributes the discovery of monsoon winds to the Greek sailor Hippalos; cf. De Romanis 1997, 671–692 and De Romanis and Tchernia 1997.

¹⁵ Dio Chrys. 32.40: “And what I said just now about the city [sc. Alexandria] was meant to show you that whatever impropriety you commit is committed, not in secrecy or in the presence of just a few, but in the presence of all mankind. For I behold among you, not merely Greeks and Italians and people from neighbouring Syria, Libya, Cilicia, not yet Ethiopians and Arabs from more distant regions, but even Bactrians and Scythians and Persians and a few Indians, and all these help to make up the audience in your theatre and sit beside you on each occasion (...)”. Indeed, these very people are mentioned in both routes described in the *PME*: the Ethiopian coast with the reloading point Adulis, Southern Arabia with the trading port Kane, and Northwest India with the hubs Barbarikon and Barygaza.

¹⁶ The archaeological finds and the Indian sources also suggest that the focal points of the Roman long-distance trade with India were situated on India’s south-west coast, which was connected to the eastern coastal regions and the Ganges area via local distributors; cf. Begley 1983, 461–481; Weichbrodt 1989, 57–61; Deo 1991, 39–45.

¹⁷ That the same – at least in the 3rd century AD – is also true for the island of Soqatra, which is mentioned in the *PME* as *διοσκοπίδα* (§ 30), by Pliny (*NH* 6.32.153) under the name Dioscuridu and by Ptolemy (*Geogr.* 6.7.45) as *διοσκοπιδης*, is shown by a collection of 48 inscriptions discovered in 2001. All of the texts originate from a cave near Hoq located near the northern shore of the island. They mention people from Palmyra and also have Arabian and Indian inscriptions. Cf. Dridi 1990, 593–595; Biedermann 2006, 33–34.

¹⁸ Moreover, he was an *accens(us) velat(us)*, a member of an office of uncertain origin that might have had auxiliary duties for the magistrates in the municipal administration. During the Empire, people from the equestrian order as well as free-born citizens or freedmen in a renowned or profitable position could act as *accensi*; cf. Kubitschek 1893, 135–137.

¹⁹ Plutius Epaphroditus’ freedmen set an inscription at the same place (*CIL* XIV 2812 = *ILS* 7601). Moreover, we know of a Roman epitaph which he had ordered for his son, as well as for himself and his freedmen and their ancestors (*CIL* VI 24356).

10. (In)visible Spinners in the Documentary Papyri from Roman Egypt

Sophie Gällnö

Introduction

This chapter presents the few known Greek documentary papyri from the Roman period in which spinners appear, with a view to examining the various factors that may influence the visibility of this type of female work in papyrological sources. First, the way in which spinning and spinners are generally represented in other kinds of Graeco-Roman sources is discussed. Then, we turn to Roman Egypt: after reviewing a few facts about textile production in this area, a brief account of the particularities of papyri as sources in general is given. Finally, four papyri which directly refer to spinners are considered.

Women and Spinning in the Graeco-Roman World

In the Graeco-Roman world, spinning wool was probably one of the most female of activities. The strong link between this task and femininity is clearly shown in several examples from literature, iconography and funerary monuments. In the first song of the *Odyssey*, for instance, Telemachus orders Penelope, his mother: “Go, then, within the house and busy yourself with your daily duties, your loom, your distaff, and the ordering of your servants; for speech is man’s matter, and mine above all others – for it is I who am master here” (*Odyssey* I. 356–360; translated by Samuel Butler). Twelve centuries later, the Church Father John Chrysostom preaches in a homily: “Woman and man are separate in their physical activities: the former holds the loom, the distaff, and the basket, looks after the house, stays at home and takes care of children; the latter attends courts, assemblies and the agora, wages war and fights in the ranks” (John Chrysostom, *De studio praesentium* = *Novae Homiliae* V, CPG 63, 488). In both cases, the author lists a series of specific female tasks, among which appears the activity of spinning, symbolised by the distaff, and – in John Chrysostom – the wool basket.

These quotations illustrate two essential characteristics of spinning work. Firstly, to spin is not only a common domestic task; it also carries an important symbolic and moral dimension.¹ In many sources, the image of a spinning woman is used as a reference to a feminine ideal; as a consequence, when a funerary stele depicts a spinning matron, we do not know if the dead woman really used to spin, or if the image is merely a symbol of her virtue. Secondly, most of the ancient sources represent spinning as an intrinsically feminine task. When performed by men, spinning is often synonymous with transgression, as shown by the figure of

Heracles handling the spindle at Omphale's feet.²

Among the Roman epitaphs commemorating the occupation of a dead person, some are dedicated to female spinners, referred to as *quasillariae*; this word does not have a masculine form.³ For Lena Larsson Lovén:

It is significant in view of the fact that the people who have documented textile-job titles in their epitaphs are mostly of low social standing, both men and women, such as slaves and ex-slaves. Thus, even here, in another social context than that which caught the interest of the Roman authors, it was impossible for a Roman man to be associated with spinning wool in any context at all (Larsson Lovén 2007, 232).

It still remains difficult to ascertain if, in the Graeco-Roman world, spinning could be performed by men in practice, or if this task was strictly reserved for women. Pliny the Elder asserted that “spinning flax is suitable even for men” (Plin. *NH* 19.3.18).⁴ This comment suggests that under normal circumstances, spinning could hardly be a male task. For Miriam B. Peskowitz:

The culture Pliny knew used work to formulate notions of gender and sex, and used gender and sex as ways to talk about work. Practically, labors were separated into what were considered gender-appropriate divisions. Gendered work tasks demonstrated what men were and what women were, and they showed the clear distinction between the two. Pliny's text seeks to modify these distinctions, at least in one small way. In the case of delegating spinning to women, the logic of gender difference had not worked in the best interests of men. One result was that in flax production, men would have to compromise the proprieties of masculinity by spinning. That Pliny recovers and seeks to defeminize flax, and not wool, is significant. Flax and linen were more highly valued than wool. Recuperating flax spinning for men, Pliny intervenes in a gender culture that might deny a lucrative work task to some men (Peskowitz 1997, 80).

Thus, even if the connection between spinning and femininity was partly symbolic, it is quite likely that the gender division of labour, observable in most of the non-documentary sources (e.g. iconography and literature), was often practised in real life – at least for the spinning of wool. Therefore, we may suppose that the work consisting in transforming wool into yarn was predominantly done by women. Due to the lack of documentary sources, however, we must limit ourselves to vague suppositions. Almost nothing is known about women's contribution to the large-scale textile production. Most scholars conjecture that the yarn used in the Roman textile industry was manufactured by both free and enslaved women; they generally explain the scarcity of sources with the hypothesis that this sector of production was domestic and informal.⁵ Before examining the evidence of spinning and spinners in the documentary papyri of the Roman period, let us consider the nature of the textile industry in Roman Egypt.

Spinning and Spinners in Roman Egypt

Thanks to papyrological sources, the size and organisation of the Egyptian textile production is relatively well known.⁶ During the Roman period, textile production seems to have been quite important, at least in some regions. An Oxyrhynchus papyrus from the second half of the 3rd century AD (P.Oxy. Hels. 40), containing a list of clothes for export, demonstrates that almost 2000 pieces of cloth were exported in five days; extrapolating from this evidence, scholars have concluded that the Oxyrhynchite region may have exported between 80,000 and 100,000

pieces of cloth in one year (Carrié 2004a, 30–31). Spinning would have been an important sector of this cloth production; and if it actually were performed by women, we must suppose the existence of a significant female labour force in the Oxyrhynchite region at the end of the 3rd century AD.

John Peter Wild has argued that the work of five spinners was necessary to provide yarn for a single weaving loom;⁷ in any case, it is generally admitted that spinning was a production bottleneck (Carrié 2004a, 20, 38–39). Using a ratio of only two spinners for one weaver, Jean-Michel Carrié cautiously estimates that a cloth production sufficient to cover the needs of an ancient population would have employed 7.5 % of this population's women for spinning, and even more than that, if the spinners were working part time (Carrié 2004a, 38–39). Yet, this labour force is almost invisible in papyrological sources. To understand this lack of visibility of spinners in the papyri, we first have to consider some general aspects of this range of documents.

Papyrological Sources: Some Generalities

As in the case of other kinds of sources, information transmitted by papyri is determined, and partly distorted, by several factors. First of all, because of the fluctuations in the conservation and discovery of papyri, some regions or periods are much better documented than others. Secondly, the quantity and type of documents left by different socio-economic groups vary considerably. The majority of papyri are linked to the governmental administration, while transactions and agreements between individuals were probably conducted orally most of the time and papyri were used only when there was a specific need to safeguard a right or a property (Bagnall 1995, 13–15; Palme 2008, 358–361). Nevertheless, papyri are often considered as more neutral and objective sources than, for example epitaphs or literary texts. Papyri seem to shed more light on everyday life, in Graeco-Roman Egypt in particular, at least within the constraints listed above.

The Visibility of Women's Activities in Greek Documentary Papyri

Examining different aspects of women's life visible in Graeco-Roman papyri, Jane Rowlandson observed that, apart from the agricultural sector, there are three kinds of female work which predominantly appear in these sources: nursing, prostitution and weaving (Rowlandson 1998, 246–247). Compared to the wide and diverse range of masculine activities mentioned in the papyri, this list is undoubtedly very meagre.

Here, it must be emphasized that women are generally underrepresented in papyri. This phenomenon is related to some gender aspects of ancient society. Women were probably more active in the domestic sphere, which is less documented in papyri (e.g. Beaucamp 1993). Moreover, fewer women than men had the level of education and literacy which was needed to write various kinds of documents (Sheridan 1998, 189–191). However, we must remember that these factors could vary according to social status.

Among the range of papyrological documents, there is one specific kind of papyrus in which women appear quite often: the private letters. Private letters emanating from women living in Graeco-Roman Egypt have been usefully gathered and translated in a sourcebook by Raffaella Cribiore and Roger Bagnall (2006). In

these letters, the task of weaving, especially performed in a purely domestic context, appears quite often – although these occurrences are fewer than we would have expected, considering the importance of textile work in this ancient culture. Spinning, on the other hand, is hardly ever mentioned (Bagnall and Cribiore 2006, 77–78).

To explain this phenomenon, Cribiore and Bagnall suggest that these women could probably buy ready-spun yarn, or have it spun for them by their servants. This hypothesis is perfectly coherent with the fact that most (but not all) of the women who wrote letters belonged to the upper-class (Bagnall and Cribiore 2006, 8–11). As a consequence, we must admit that even if private letters are a highly informative source for the study of the everyday life of some women in antiquity, they are less useful when it comes to humble activities, like spinning. However, among the four papyri from the Roman period which directly deal with spinning, three are letters and two of them emanate from women. These four papyri are examined in the following section.

Female Spinners in Greek Papyri of the Roman Period: Some Examples

Several papyri of the Roman period contain references to the yarn trade, but they do not provide any information regarding who actually produced the yarn. To find such evidence, we have to examine the papyri which are specifically related to spinners. Thousands of edited papyri are now available for this period, but only two of them contain the verb *klothēin* (to spin). The first is a report of the proceedings of the senate from late 3rd-century AD Oxyrhynchus.

P.Oxy. XII 1414, l. 4–5. Origin: Oxyrhynchus; date: AD 271–272

The first part of the document deals with a problem concerning a delivery of linen textiles – which should have been provided to a linen tax, the *anabolikon* – due to the absence of a particular material: spun yarn.

[The prytanis said,] “You examined the list of the imperial anabolikon and fixed a limit, and your resolution was submitted to the strategus, but [the linen merchants (?) ...] made the excuse that those who were handling [... the work (?)] in question and their wives could not spin the yarn.

This papyrus reveals the existence of a group of people, who should have provided a significant amount of yarn for the *anabolikon* – a Late Antique linen tax which was often paid in kind (Bowman 1971, 70–74; Sheridan 1999, 216). The wording may imply that even men had to collaborate in this work. One participle is used to describe the men’s role, from the verb *metacheirizomai*, which literary means *to handle*. In Greek literature, it has several meanings, such as *to administer* or *manage* something. In the papyri from the Roman period, it is used in the sense of *practising a trade* (P.Fay. 106, l. 24, Arsinoite nome, 2nd century AD; PSI III 241, l. 8, Antinoopolis, 3rd century AD). Here, in P.Oxy. XII 1414, the object of the participle of *metacheirizomai* is lost in a lacuna. Only some traces of letters remain, and the editor proposes to read *ergon* (task).

Due to the lacunae, this passage is difficult to interpret. At least two grammatical constructions are conceivable here. On the one hand, we can suppose the existence of an infinitive verb in the lacuna, describing the action of the men who were handling something. In that case, only the women would be the subject

of the verb and its complement *could not spin*. As a consequence, this papyrus would be describing an organisation where men took the responsibility of the production of yarn, leaving the actual task of spinning to their wives. On the other hand, it is possible that the lacuna did not contain an infinitive verb, and that the men were also the subject of the verb and its complement *could not spin*. Thus, the men would also have been expected to spin yarn – note that it is not wool, but linen yarn. As the passage of Pliny the Elder quoted above suggests, the traditional sexual division of labour may not have been applied very strictly to linen.

In any case, female spinners are simply referred to as *their wives*, or *their women*. These female workers seem to have been crucial to the fulfilment of the task, even if they evidently did not participate in the official transaction. In all likelihood, these women would never have appeared in a papyrus if the yarn had been provided as agreed with the authorities.

P.Oxy. XXXI 2593. Origin: Oxyrhynchite nome (?); date: 2nd century ADs

The second document containing the verb *klôthein* is a letter addressed by a woman called Apollonia, to a male customer, Philetos:

Apollonia to Philetos, greetings. I greet you warmly, and Herakleides, and I sent you by way of Onnophris the younger the yarn for the outfit of Herakleides: 7 mnai⁹ of woof at a weight of [...] staters,¹⁰ making 110 reels; and warp from Lykopolis weighing 90 staters, that is 75 balls. The price of these is: for the warp, at 21 drachmas for 30 staters weight, total 63 dr.; the price of the wool of the woof is 36 dr. 30 staters' weight has already been spun for one stater,¹¹ and I gave 4 dr. from my own funds for the expense of preparation of a weight of 10 staters of wool. I gave out to be spun three mnai at the rate of an obol for a stater's weight, making 17 dr. 5 ob., and I spun the remaining four mnai and put into them a colored black thread; from them put three mnai into the cloak of the outfit. We greet you warmly. Farewell. The warp has been soaked here at my place (Second hand:) Year [...], month of Thoth. (Address:) Deliver to Philetos for Herakleides.

This document is a sort of list, accompanying a delivery of yarn ordered for the purpose of weaving an outfit. By describing the content of the delivery, Apollonia wants to make sure that nothing has been stolen in transit. The letter is written in a very polite and friendly manner, but the price indications suggest that the correspondents are engaged in a commercial transaction. Apollonia did not spin all the yarn by herself, but has entrusted a part of the work to other persons whose identity remains unknown. She seems to have taken on a more arduous part of the task, that of introducing a black thread in the yarn. It is impossible to know whether Apollonia and her providers were involved in an established business, or if the transaction referred to in this letter was occasional, but the text gives the impression that Apollonia was an experienced businesswoman.

P.Mert. III 114. Origin: Arsinoïte nome; date: end of the 2nd century AD

The next papyrus may be related to the same kind of business, this time shown from the point of view of the customer. It is one of the only two documents from the Roman period containing the verb *neô*, which also means to *spin*.

Achillas to Sarapias and Thermouthis, greetings. Even without my writing to you I imagine that you have begun to think about my clothes now that my father's are finished (?), since you know my wishes and that you are making them for a person of distinction? And so I am writing to you in order that when you are working on them you make the thread for the woof very much finer,

because I have discovered a thread for the warp at 8 dr. the ... stathmion¹² and it is very fine. For I am buying purple there at 4 dr. the stater's weight. When you are engaged on spinning them, let me know and I will do what is necessary. I pray for your well-being. (Address:) To Sarapias and her mother from Achillas.

Sarapias (a woman) and her mother Thermouthis have apparently manufactured clothes for a man, and now the son of the latter writes them a letter in order to specify his requirements. He would like both women to spin the weft yarn finer than usual, to match a very fine warp yarn he had found at a good price elsewhere. As in the previous document, it appears here that the yarn for a single outfit is not spun by only one person.

It is not possible to ascertain if the correspondents of this letter had a producer-customer relationship. Achillas mentions the good price of the fine yarn he found elsewhere, perhaps because he wants Sarapias and Thermouthis to reduce their own prices. On the other hand, the two women could also have been servants receiving directives from their master, momentarily absent from the house.¹³ As with most private letters, this one does not provide much information about the context in which it was written. Yet the last document, although being a letter, shows us the situation of a woman who claims that she needs to spin for money; she also uses the verb *neô*.

SB XIV 11881. Origin: unknown; date: 4th century AD¹⁴

Allous to my lady mother Faustina, greetings in the Lord. Having chanced upon a letter carrier, I greet your motherly disposition, my lady. Since the things you wrote to me show ... that it is possible ... to come ... [long lacuna ... the needs ?] of the orphaned children of my brother for which, being a woman, I am unable to provide them. Therefore, if you have enough, send me through the letter carrier 2 pounds of tow so that I could spin and spend (them) for them. I greet you heartily. The little children salute you. I salute mother Kyriake. I pray for your health.

This letter is written by a woman, Allous, to her “mother” Faustina.¹⁵ She explains that she has to take care of her late brother’s children; yet, “being a woman”, she is unable to provide them with what they need. She asks Faustina to send her flax tow so that she can spin it and, probably, sell it. Allous’ letter is particularly noteworthy for at least two reasons. First, it provides an example of a woman who explicitly says that she must spin for money. We do not know of Allous’ social status, but at the time of the writing of this letter she seems to be quite penniless. Secondly, this letter illustrates how much documentary papyri can be pervaded by the moral values of the society in which they are produced. Allous claims that she is unable to keep her nephews because she is a woman. The gender stereotype of female weakness is omnipresent in literary, legal and papyrological sources of the Roman period (Beaucamp 1990–92, vol. II, 45–49, 280–281; Evans Grubbs 2002, 51–60). Generally, this stereotype is used to justify women’s exclusion from the public sphere, or their submission to men, but also to arouse kindness and pity. It is often in the latter way that it is used in the papyri; particularly, it often appears in women’s petitions.¹⁶

In Allous’ letter, the argument of female helplessness is used to beg for two pounds of tow. It could seem somewhat exaggerated to resort to this strategy of *captatio benevolentiae* for such a modest request. Yet another explanation for this argument could be given by other ideological elements. Allous is a Christian

woman, as her introductory greeting shows, and she argues that she wants to spin the tow not for herself, but for two orphans. The figure of the poor but virtuous woman, who modestly survives through spinning or weaving, has many parallels in Christian literature (Krause 1994, 130–144). Of course, this figure was already present in pagan literature, but it is enhanced in a specific manner by Christians. Indeed, several Church Fathers exhort poor widows or female orphans to earn their living with textile work; this kind of livelihood was also central for nuns and saints, real or fictitious (Krause 1994, 136–139).

There is probably a strong link between the image of female helplessness and the stereotype of the poor but virtuous Christian women, spinning for the survival of small orphans. At first sight, it appears contradictory to claim that a woman is unable to provide for the children, and then to ask how precisely to cater for these needs. Essentially, both statements are related to the same rule: the limitation of women's activities into one specific area.

Allous writes her letter because she needs to resolve a financial issue. Her undertaking puts her – a woman – in the position of a head of household, earning her own income. This attitude may have been poorly received in her social environment. In contrast, acting as a good Christian, showing awareness of her feminine weaknesses, perhaps corresponded to a more acceptable form of behaviour. By spinning yarn, she certainly used one of her familiar skills, but she also respected the traditional division between feminine and masculine roles.

Conclusion

The four papyri discussed in this chapter do not contradict the general opinion that the textile industry in Roman Egypt included spinners working in domestic or informal spheres. They in reality provide scarce information about the large-scale production of yarn, and the participation of women in this sector. However, the first example proves that female spinners' work could be a decisive factor in a chain of textile production, yet this papyrus also gives the impression that these workers would usually not appear in official documents. The second and third examples demonstrate that the manufacture of a single outfit required the work of several persons, and at least some of them are women. In the first case, a woman says that while she herself has spun part of the yarn, others also took part in the production. In the second case, a man orders yarn from two female spinners, but he has also bought some of the yarn elsewhere.

That this kind of transaction occurs so seldom in the papyri may be due to the fact that they were usually carried out orally. On the other hand, letters are full of information which could have been exchanged orally, if the partners were not geographically distant from each other. However, most of the women who wrote letters did not belong to the same social class as the women who spun for money. We can wonder why there are not more letters addressed to spinners – perhaps the yarn was mostly purchased at the market, or from women living in the neighbourhood.

Finally, the last case we examined provides an example of a documentary papyrus pervaded by ideological elements connected to gender. Allous' letter may suggest that working for money was not highly acceptable for women of a certain social standing, unless this work was performed within the frame of traditional and, in this case, Christian values. Hence we can wonder to what extent this

common disapproval of feminine lucrative work may have contributed to the invisibility of women's activities in the papyri.

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¹ For the symbolism of spinning in the Greek world, cf. Verilhac 1995, 91–99; 108–112; Cavalier 1996; Badinou 2003. For the Roman world, cf. Maurin 1983, 146–151; Boëls-Janssen 1993, 173–182; 241–252; Cottica 2007; Larsson Lovén 2002; 2007.

² Boëls-Janssen 1993, 243–244; Maurin 1983, 146–147; on the figure of the spinning Hercules on funerary stelae, cf. Cottica 2007, 222–223.

³ These inscriptions are *CIL* 6. 6339–6345, 6. 9496, 6. 9849–9850, all from the city of Rome, cf. Larsson Lovén 2007, 235 note 26. Apart from 6. 9849–9850, all the occurrences of *quasillaria* are from the *monumentum Statiliorum*, a commemorative list of slaves or ex-slaves who worked for an important family – thus not from individual epitaphs. For a brief commentary, cf. Dixon 2001, 122.

⁴ *Linumque nere et viris decorum est*.

⁵ Cf. recently Liu 2009, 91–92. See also Wipszycka 1965, 29–30; 36; 87–89; Labarre and Le Dinahet 1996, 65; Carrié 2004a, 20. For a critical reflection on this kind of suppositions, cf. Dixon 2001, 130–132.

⁶ Wipszycka 1965; Carrié 2004a. For further references see Carrié 2004b.

⁷ Wild 2002, 8–9. According to Roth 2007, 81–82, around 135 hours of spinning were needed to make one Roman tunic.

⁸ This letter is also presented by Rowlandson 1998, 269 and by Bagnall and Cribiore 2006, 353–354.

⁹ The *mnā* is equivalent to 100 *drachmas*, and one *drachma* (as a unit of weight) weighs around 3 grams.

¹⁰ The *stater* is a weight of around 14 g, but it is also a monetary unit, equivalent to four *drachmas*; cf. Rowlandson 1998, 269.

¹¹ The construction and meaning of this sentence is quite obscure.

¹² The *stathmion* is another unit of weight.

¹³ We know from another document, *P.Mert.* II 80, that Achilles' father lived in Alexandria for a while, to escape some problems with the authorities; perhaps Achilles went away to visit him?

¹⁴ This document is also included in the anthology of Bagnall and Cribiore 2006, 357.

¹⁵ In papyri, the words mother, father, sister, brother, daughter or son, are often used to express respect or tenderness even to people who do not belong to the family.

¹⁶ For a chart of petitions containing the idea of female weakness, see Beaucamp 1990–92, vol. II, 46.

11. Textile Production Centres, Products and Merchants in the Roman Province of Asia

Isabella Benda-Weber

Introduction

One of the most important manufacturing sectors of Asia Minor was the production of textiles, which was due to several favourable preconditions: besides the abundant sources of raw material, advantageous locations, age-old technological knowledge and other competitive parameters, textile workers had built up a social network and were well organised, both locally in guilds and through personal relations in the overseas trade markets. Furthermore, the textile workers developed into specialists, sharing the various steps of the production process among them. Thus, a number of new professions arose around the manufacture and finishing processes of textiles, which are well documented by epigraphic evidence.

Textile Production in Asia Minor: Location Factors and Tradition

The importance of textile production in Asia Minor is a result of the combination of several elements. The entire area extending from the Aegean coast to Phrygia, Galatia and Cilicia had always been suitable for husbandry of large flocks of sheep (Her., *Hist.* 5, 49) and goat, and produced wool of high quantity and quality (Blümner 1869, 27; Hanfmann 1983, 11; Drexhage 2007, 169). Other important location factors like climate and vegetation, including the growth of dyeing-plants, rivers, towns, harbours and local, regional and long-distance trading routes were in place long before the epoch of the Roman Empire.

The Roman province of Asia covered the historical regions of Mysia, Troas, Aeolis, Ionia, Lydia, Caria, Doris and parts of Pisidia and Pamphylia, which had long and flourishing cultures. Several kingdoms, one displacing the other, provided the structures for the development of urban centres and great harbours, which had existed from archaic times on, based upon Bronze Age and earlier forerunners. The local dynasties promoted the courtly culture of luxury with their need for splendid robes and home textiles. Furthermore, the textile industry was organised centrally by the court for export, as a basis for “wealth and economic might” (Burke 2007, 64). Luxury garments were highly valued in the oriental world as gifts in diplomatic exchange being a sign of prestige (Xen. *Anab.* 1. 2. 27; Her. *Hist.* 3, 20; Walser 1966, Pls. 8, 12, 15–16, 18–19, 23, 27; Boehmer 1973, 156; Sancisi-Weerdenburg 1989, 129–146; Miller 1997, 127–128).

There is much evidence for the famous textile products of the Phrygians of the

8th century BC. Gordion as a centre of textile manufacturing is evidenced by the large quantities of loom weights and some richly-patterned textile finds of high quality (Fig. 11.1; Bellinger 1962; Boehmer 1973; De Vries 1980, 35. 37; Ellis 1981; Burke 2010). Due to the knowledge acquired from long-term involvement in producing and trading textiles, a distinct industrial production had developed already in pre-Roman times (Drexhage 2007, 169).



Fig. 11.1. Examples of patterns of Phrygian textile finds. (After Bellinger 1962, 25–31 pls 10–16 and Boehmer 1973, 155 figs 9 a-e).

Textile production and trade was one of the most important branches of the local economy in Asia Minor before, during and after being part of the Roman Empire, but it was in Roman times that local textile production reached high significance. The preconditions for this could have been the fruitful interactions between the “prosperous and productive countryside”, the urban centres and harbours, i.e. the good networks within the Empire (Poblome 2004, 501). The high level of urbanisation and the socially stratified urban society favoured the existence of a group of consumers of refined and luxury products (Drexhage 2007,

170). Three modes of textile production can be distinguished: 1) simple garments and textiles for private use produced within the agricultural household; 2) regional centres with a wider range of textiles produced for local trade; 3) manufactories which were specialised in producing high-quality, luxury textiles, “referred to by provenance as a quality label and guarantee” (Poblome 2004, 493), exclusive, expensive and esteemed products for “regular export to distant markets” (Poblome 2004, 493 and 494).

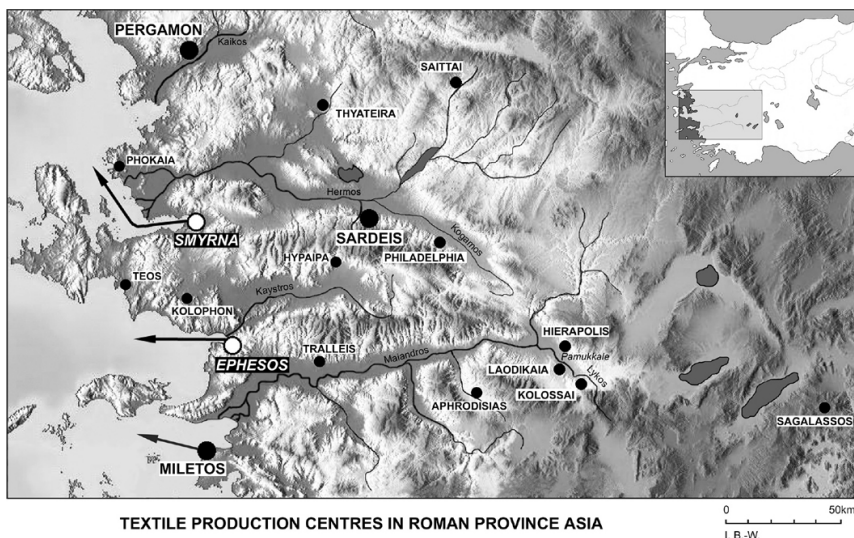
Spinning and weaving for domestic purposes was done even in upper class households, while for producing garments of higher quality, professional craftspeople were employed (Poblome 2004, 492). The differentiated products required specialists, who were organised into professional associations or guilds (*ἐργασίαι*), even in smaller towns. From Thyateira, more guilds are known than from any other contemporary city in the Roman province of Asia (Ramsey 1904, 324–335). The rich epigraphic material shows a differentiated structure of professions in textile production: wool cleaners (*ἐριοπλύται*), wool workers (*ἐριουργοί*), wool weavers (*λανάριοι*), linen weavers (*λινουργοί*), makers of outer garments (*ἱματευόμενοι*), fullers (*γναφεῖς*), flax workers (*σπιπινάριοι*), carpet weavers (*καροδαπισταῖ*), dyers (*βαφεῖς*) and purple dyers (*πορφυροβάφοι*), as well as several professions of leather workers, although no guild for spinners is mentioned (Pleket 1988, 31–32; Zimmermann 2002, 146–154; Poblome 2004, 493; Drexhage 2007, 172–173, 176). Each guild owned property in its own name, made contracts and wielded wide influence in the city’s political, economic, social and religious life. Each guild had a patron deity, proceedings and feasts, provided specific benefits to its members and took action to protect their interests (Zimmermann 2002, esp. 78–80).

Centres of Textile Production

Various literary, epigraphic and archaeological sources bear witness to several cities of the Roman province of Asia as centres of textile production. Besides the well-known centres Miletos and Sardeis, other important strongholds of textile production surprisingly were some smaller cities like Thyateira and Saittai in Lydia and the three cities in the Lykos-Valley: Hierapolis, Laodikeia and Kolossai (see Fig. 11.2).

Miletos

Textile production in the city of Miletos is attested from the Bronze Age onwards. Numerous loom weights and spindle whorls as well as crushed murex shells have been found (Peters et al. 1999; Niemeier 2000; Gleba and Cutler 2012) during the excavations of the Minoan settlement of Miletos IV (1700–1490/50 BC), as well as on the small island Tavşan Adası near Didyma from the Middle Minoan Ib/II.¹



TEXTILE PRODUCTION CENTRES IN ROMAN PROVINCE ASIA

Fig. 11.2. Textile production centres in the Roman province of Asia (Drawing: Isabella Benda-Weber, based on <http://www.maps-for-free.com/>).

The soft wool of the Milesian sheep was of superior quality and held in great esteem from early times onwards. According to Athenaios (*Deipn.* 12, 519 b), the inhabitants of Sybaris in south Italy – whose refinements of luxury had rendered their very name proverbial – were particularly noted for the splendour of their attire, which was made of Milesian wool.² From the trade connections, which possibly existed already in the 7th century BC, a great friendship arose between the two cities. Milesian sheep were exported to Samos by Polycrates (Ath. *Deipn.* 12, 540 d) and to Tarentum (Wacher 1987, 508), which also became famous for its wool and wool cloth of the finest quality. Sheep with valuable fleeces were protected by coverings and called *oves pellitae* or ὑποδίφτερα ποιμαί (Strab. 4, 4, 3; Clem. Alex., *Paed.* 2, 10, 111; Horace, *Carm.* 2, 6, 10; Columella 7, 2, 5; 7, 3, 10 and others).

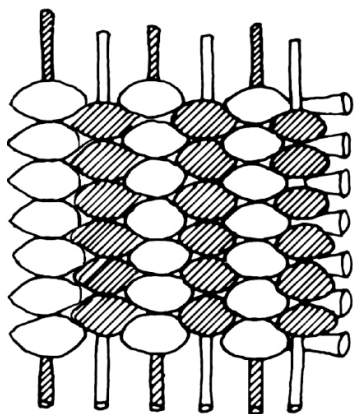
During the following centuries, the famous fine wool of Miletos (ἔρια Μιλήσια, *Milesia vellera*) became a symbol of privilege and quality, a sign of social distinction and refinement, and was mentioned frequently by Greeks and Romans until Late Antiquity (Blümner 1869, 32 with references).³ The vast bulk of the precious wool was made into finished garments (*Milesiae vestes, chlamydes*) and fine and coloured carpets, blankets, curtains or tapestries (Μιλήσια στρώματα; *aulaea vela picta et grandia*: Isid. Hisp., *Etym.* 19, 26, 8), which were used until imperial Roman times (Blümner 1869, 32 with references).

The coastal position of Miletos facilitated the development of the purple dyeing industry. Milesian purple dye was as famous as the wool itself; the *Edictum Diocletiani* (24, 6–7) still mentions the twice-dyed Milesian true purple wool and another one of secondary quality (Herrmann 1975, 141). A Milesian inscription (Museum of Balat, Inv. Nr. 1679; Herrmann 1975, 142–147) and excavations of strata of muricid shells meters high prove the flourishing purple dye industry in the city (Herrmann 1975, 141 with reference). Furthermore, cloaks and overcoats

from fine and coarse Milesian wool were manufactured and dyed purple in the Ionian town of Teos (*SEG* II 79; Robert 1976, 175–188; Austin 1981, 176 no. 99).

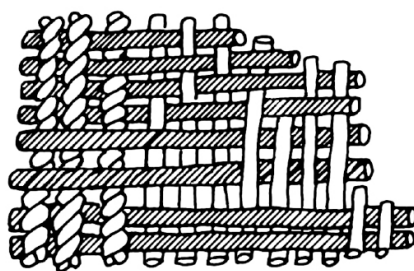
Sardeis

According to the myth of Arachne (Ovid *Met.* 6, 1–145; Verg. *Georg.* 4,246), she and her family invented linen and nets and introduced the spindle in wool working in her homeland Lydia, known for its skill in weaving and stitching (Plin. *HN* 7, 196). Arachne lived in Hypaipa, her father Idmon from Kolophon was famous for dyeing with purple from Phokaia. Pliny (*NH* 7, 196) also refers to Sardeis as the town where the art of dyeing was supposed to have been invented.



A

Weft Faced Tabby



B

Pattern Weave

Fig. 11.3. Lydian textile patterns. (After Greenewalt 1980, 147 fig. 10).

The whole region of Lydia was famous for textile weaving and dyeing with its headquarters Sardeis, the old capital of the Lydian Kingdom, where a great quantity of loom weights made by professional potters for “weaves of differing gauges” (Roosevelt 2009, 79) were found in the House of Bronzes at the Lydian market (Hanfmann 1983, 78). The discovery of traces of textiles on iron plates in tomb BT 63.2 at Bin Tepe with a simple weave and 23 threads per cm (Fig. 11.3; Greenewalt and Majewski 1980, 138–140) illustrates only the basic level of the famous Lydian textile technology described in literary sources (Hanfmann 1983, 78). Sardian chitons (Σαρδιανικός χιτὼν: Pollux 7, 77) with fringes (Ohly 1953, 46–49), hats, embroideries, blankets, coverlets, couch covers and cushions (Hanfmann 1983, 11) were highly valued elsewhere, e.g. in Greece and Italy (Blümner 1869, 35). The famous polychrome Sardian carpets (ψιλοτάπιδες Σαρδιαναί; Clarchus Solensis, Gergithius fr. 25; Ath. *Deipn.* 6, 255 e) were exported to the Persian court and only the Great King was allowed to tread on them (Herakl. Koumanos, *Persica* 1, 1; Ath. *Deipn.* 12, 514 B-C; Greenewalt and Majewski 1980, 134–135). The high-quality textiles of the Ionian-Lydian region

were held in high esteem at the Achaemenid court and were brought as gifts or as a part of the regular tribute, as the reliefs depicting the 12th delegation in Apadana at Persepolis demonstrate (Barnett 1957, 68–70; Walser 1966, pls. 19 and 60; Hanfmann 1983, 105).

Sardeis was a centre of textile dyeing where several bright colours were used, especially purple (Greenewalt and Majewski 1980, 136–137; Dusinger 2003, 22–23). As mentioned earlier, mythology located the invention of wool dyeing in this city. Purple-dyed garments are mentioned by Sappho about 600 BC (Sapph. 5, 95 D; 3, 56 D; 5, 99 D), as a gift of the Lydian king Kroisos (Her. *Hist.* 1, 50), and in the Inventory Lists of the Heraion of Samos of the 4th century BC (Ohly 1953, 46–50). Purple dye was also used to colour ivory (Hom. *Il.* 4, 141–147) and leather (Hesych s. v. *μάσθλη*). Since the days of the old Lydian Kingdom, the capital Sardeis was also famous for her blood-red dye, the *βάμμα Σαρδιανικόν* (Hesych s. v.) or *φοῦιξ Σαρδιανικός* (Arist., *Ach.* 112). It was used to dye coverlets for dining couches and carpets (Plato, *Comicus frgt.* 208 apud Ath. 2, 48 a-b.; Greenewalt and Majewski 1980, 137). From Byzantine times, we know of dye-shops in Sardis owned by Jews (E 6-E 8; E 13-E 14) and Christians (W 7-W 8; Hanfmann 1983, 165; Crawford 1990, 15–18).

Thyateira

The city of Thyateira was re-founded on the site of a Lydian settlement called Pelopia by Seleucus I Nicator (311–280 BC), who established it as a military outpost on the road from Pergamon to Sardis and settled it with soldiers from Macedonia. Thyateira lay on a branch of the river Hermos and had a direct connection to the great harbour of Smyrna. The city was famous for its textile production and textile dyes, evidenced by a number of inscriptions from the various guilds of wool workers, linen weavers and manufacturers of outer garments and dyers (Zimmermann 2002, 146–154). More guilds are known in Thyateira than in any other contemporary city in the Roman province of Asia (Ramsey 1904, 324–335; Drexhage 2007, 175–176).

Hierapolis, Kolossai and Laodikeia in the Lykos Valley

The Lykos Valley, a tributary valley of the river Maiandros in Asia Minor, not far from the great harbours of Ephesos and Miletos, provided favourable conditions for textile production. The cities of Hierapolis, Kolossai and Laodikeia situated close together and cooperating with each other soon developed as an important area for weaving and dyeing clothes and rugs of both average and luxury quality. The clothes manufactured in the Lykos Valley were a symbol of prestige and privilege until late Roman times.

Hierapolis, founded in the 2nd century BC, became a centre of dyeing because of the nearby mineral springs: Their adjuvant impact to the dyeing process we will discuss later. Inscriptions prove the activities of several guilds, most frequently of purple-dyers or rather “red”-dyers⁴ (Drexhage 2007, 172–173 n. 339 with further references).

Kolossai was the major centre on the trade route from Sardeis to Ikonion in the 5th century BC. The city was famous for the *colossinum*, glossy dark-red or violet wool (Plin. *NH* 21, 27, 51). It lost its importance due to the rise of Hierapolis and Laodikeia; by the 1st cent. AD its significance had decreased.

Laodikeia was founded by Antiochos II in mid-3rd century BC on the south bank of the Lykos River, and remained an important textile-producing city until early Byzantine times, because it produced wool of a raven black colour and wool of a quality superior to even the famous Milesian wool (Strabo *Geog.* 12, 7–16). The mass production of textiles seems to have begun in the Lykos region. A symbol of the long tradition and the commercial prosperity of Laodikeia is a sales hall of the textile dealers, attested by an inscription from the 3rd cent AD (Corsten 1997 no. 50; Drexhage 2007, 246). A well-preserved dye workshop of the 5th century AD was discovered in 2005 during the excavation of the North Necropolis of Laodikeia. It is complete with grinding stones, presses and containers, terracotta and limestone strainers, and a metal cauldron for heating the dye and dyeing the textile.s

Textile Products

High quality wool and linen

Milesian wool's fame goes back to the 7th century BC and remained so until the time of the late Roman Empire (Blümner 1869, 31–32 with references). Pliny the Elder (*NH* 8,190; 29, 33) rates Milesian wool the third-best of all. The *Edictum Diocletiani* (24,6–7) mentions two different qualities of purple-dyed Milesian wool. However, the softness of the wool from Laodikeia was of superior quality (Strabo *Geog.* 12, 7–16), and Vitruvius (*De Arch.* 8, 3, 14) mentions the softness of the wool of neighbouring Hierapolis, too.

The small Lydian town of Saittai (today Sidaskale) was a centre for linen production. The conditions for the cultivation of flax were perfect in this area, and thus the λινουργοί were the most numerous represented guild. The λινουργοί are also mentioned, among others, at Thyateira, Laodikeia and Aphrodisias (Reynolds 1997, 523–528).

Dyed textiles: sandyx and purple

Wool exists in various natural colours and Pliny (*NH* 8, 73) describes several kinds from different regions of the Roman Empire, which were all native. For Asia in general, he mentions the red fleeces, which were called Erythraeae (Plin. *NH* 8, 73, 191). Accentuated by him (*NH* 21, 27, 51) is the glossy dark-red or violet wool, which was produced in Kolossai and called after the city *colossinum*.

Furthermore, the ancient authors refer to methods of dyeing the wool of living animals: Vitruvius (*De Arch.* 8, 3, 14) reports on the various colours the originally white cattle would acquire by drinking the water of the rivers of Clazomenai, Erythrai and Laodikeia, but also in Troy, Boeotia and Lucania. The sheep of Laodikeia supposedly acquired their famous jet-black (*Revelation* 3, 14–22) and very soft wool by drinking the rotten smelling water. Furthermore, *Virgil* (*Ecl.* 4, 42–45) reports that madder, when eaten by the sheep, turns their wool red.

According to myth, madder – which was called σάνδυξ (Hesychius s. v. σάνδυξ) – had a long tradition in Asia Minor, particularly in Lydia. When Herakles was serving as a slave to the Lydian queen Omphale, he was forced to wear a light-red sandyx-dyed long robe (Lyd. *De Mag.* 3, 64; Lucian *Dial.* D. 13, 2). This custom evidently reflects the practice of a local (Lydian?) festival (Müller 1830, 457). The name for such long and transparent, light-red sandyx-dyed garments was σάνδυκες or in Latin *sandices/sandines vestes* (Virg. *Ecl.* 4, 45). Σάνδυξ (Latin:

sandix, English: madder, German: *Krapp*, bot.: *Rubia tinctorum*) is a shrub, and from its root a red colourant is obtained and used to dye wool, linen, silk and leather. It produces a colour brighter than purple, if it is prepared properly. The reputation of the intense sandyx red persisted until late Roman times and three emperors attempted to discover its secret (Flav. Vopisc. *Aurel.* 29).

From Minoan times until Late Antiquity, dyeing with true purple from murex shells was practised all along the Ionian and Carian coasts (Aristotle, *Hist. An.* 5, 15; Athen., *Deipn.* 3, 88 f), and thus the vast majority of textile products could be dyed locally (Serv. ad Virg. *Georg.* 3, 306). A great deal of archaeological, epigraphic and literary sources attest to some Asia Minor coastal cities as purple-dyeing centres,⁶ for example Sardeis (Hom. *Il.* 4, 141–142; Samos Inventory Lists: Ohly 1953, 46–50), Miletos (Herrmann 1975, 141–147 with reference), Phokaia (Ovid *Met.* 6, 9; Sappho 5, 99 D [Treu 1979, 80]), Hierapolis (Dittmann-Schöne 2001, 222–229), Teos (*SEG* II 79; Robert 1976, 175–188; Austin 1981, 176 no. 99), and Kolophon (Xenophanes, Fr. 3 B). Evidence for purple-dyeing exists also from the islands of Rhodos (Forbes 1964, 119), Kos (Hor. *Od.* 4, 13, 14; Juv. 8, 101; Lyd. *De Mag.* 2, 13, 178), Nisyros⁷ and Chios (Klearch. apud Athen. 12, 539 f.). In the neighbouring region of Lycia, at Andriake, 300 m² of undisturbed shell debris dating from the 6th century AD indicate an important manufacturing place for purple dye (Forstenpointner et al. 2007, 206–208). Two Greek inscriptions from Thessaloniki (*IG* X 2, 1) and Philippi (Pilhofer 1995, 176.182) attest that in Thyateira there were not only dyers, but purple dyers in particular.

The trade in textile products – wool, cloth, clothes – dyed with purple was important for the Roman province of Asia. So the Tariff Law of Asia scheduled a 5% increase in tax on purple processing since the time of the Roman Republic, perhaps increased again by Augustus (Drexhage 2007, 246). The exorbitant prices of true mollusc purple encouraged the dyers to invent other methods to produce similar, but cheaper purple colours. Even the early surviving Phrygian textile fragments from Tumulus III at Gordion (Körte 1904, 46) demonstrate that intention, using the method of dyeing the threads with two different colours: warp in indigo blue and weft in madder red, so as to appear purple (Boehmer 1973, 153–154). Other methods include the use of yarns plied together from a red and a blue thread, over dyeing wool dyed blue with madder, as known from Egypt (Papyrus Holmensis: Lagercrantz 1913, 40–41 and 231–232) or achieving purple by using various other plants (Plin. *NH* 16, 31) mentions blackberry (*vaccinium myrtillus*) as a cheap purple dye substitute, used even for slaves' clothing, for example in Gallia.

The cities in the region of the Lykos Valley became famous for their coloured textiles thanks to the mineral waters of nearby Hierapolis, today called Pamukkale. Its high content of calcium bicarbonate cleans dirt, bleaches wool and fixes the colour of dyes (Kekeç 1997, 30). The highly desired purple colour could be produced here by a much cheaper method compared with the traditional way, for its salts serve as an effective mordant. Strabo (*Geog.* 13, 630) reports that wool dyed with madder turns purple by being washed with the water of Hierapolis.

Ready-made garments

Laodikeia was one of the most important centres of ready-made clothes – both everyday clothes and precious garments – produced not only for local use but also

for export to Italy and other areas (Ramsay 1895, 40; Drexhage 2007, 214).

The *Edictum Diocletiani* from AD 301 lists the following products which were manufactured in Laodikeia:

- The δελματική ἄσημος Λαδικηνή τρίμιτος or *asema Laodicensa trilix* (sc. *dalmatica*), a simple tunic woven of three different types of thread (*Ed. Diocl.* 19, 39). Perhaps the yarns differed in thickness or colour thus producing a pattern, or – more likely – *trimita* is an equivalent to drill fabric.⁸ The *trimita* became so famous that Laodikeia was known as “*Trimitaria*” (e.g. in the lists of the Council of Chalcedon from the 5th century AD; Ramsey 1897, 41).

- The other class of tunic produced in Laodicea, was the παραγαῦδιν Λαοδικηνόν or *paracaudae Laodicensae* (*Ed. Diocl.* 19, 40), with a purple border at the lower hem (Cod. Theodos. 10, 21, 1; Lyd., *De Mag.* 2, 4; 1, 17; 2, 21; Salmasius to Flavius Vopisc. Aurelian 46), a type favoured by the Parthians (Hesych s. v. παραγωγάς). The price varied according to the width of the purple border (Ramsey 1895, 40).

- The *vesta Laodicensa* was likely a kind of small cheap cloak or upper garment, which was widely used in the eastern provinces and named after the town where it was manufactured (Ramsey 1895, 40 and Meijer 1992, 107 with references). Presumably, it was worn fastened with a *fibula* and therefore probably may be identified with the *fibulatorium* (φιβουλατώριον; Ramsey 1895, 40), which was made from Laodicean wool, and could be plain or decorated with a purple border (*Ed. Diocl.* 19, 25, 27; 22, 19). Later, the *Laodicensa* may not necessarily have been produced in Laodikaia itself, for the name is combined with the quality of the product and could be manufactured elsewhere in the style of a product of Laodikaia. We know this phenomenon in the case of other Roman products, too, e.g. the *dalmatica* and certain types of shoes like the *gallicae* and the *taurinae* (Pásztor-Szeőke 2010).

- The βίρρος Λαοδικηνός or *burrum Laodicenum* (*Ed. Diocl.* 19, 37–38; 22, 22), an upper garment of Gallic origin, was produced in two types, a native Laodicean *birrus/burrum* and the more expensive *burrum Laodicenum in similitudinem Nervii*, an imitation of those from the Nervii of Gallia Belgica.

- The φαίνουλα Λαδικηνή καλλίστη or *paenula Ladicensa optima*, a kind of outer garment woven as to resist rain which seems to have been similar to the *paenula* of the early Empire (*Ed. Diocl.* 19, 63).

- The χλανίδα (or χλαμός) Λαδικηνή Μουτουνησίαν, a short cloak, simple or embroidered with silk, was an imitation of the fine wool fabrics of Modena but produced in Laodikeia (*Ed. Diocl.* 19, 26; 20, 4; 22, 20; Lauffer 1971, 268).

- The “prized lodex, a Laodicean weave copied from that produced at Arsinoe, an Alexandrian polymita, a damask woven out of a great number of threads” (Sebesta 2001, 69 with references).

Gold-woven textiles

A long list of literary sources and a significant number of archaeological remains of textile fragments found in the territory of the Roman Empire attest to the popularity of textiles with woven-in gold threads among the upper classes over the centuries. Gleba commendably compiled and discussed all the sources and evidence in a recent publication (Gleba 2008, 61–77).

In Roman literary sources, Attalos II Philometor (138–133 BC) was credited with

the invention of gold-woven textiles, the *Attalica* (Pliny, *NH* 8, 74; Cic., *Verr.* 4,12, 26). When he bequeathed his kingdom and his treasury to the Romans, they came into contact with these precious textiles and therefore gave them this name, notwithstanding the fact that the technique of gold weaving had been known in Asia Minor for centuries, although the Attalids cultivated it to ultimate perfection (Blümner 1869, 38). Our first reports, however, are Roman, and the authors report that gold-woven textiles were being used as clothes (*vestes Attalicae*; *tunica aurea*: Pliny, *NH* 33, 63), draperies (*aulaea Attalica*; Val. Max. 9, 1, 5) and decorative textiles, such as tapestries, canopies or blankets (*parapetasmata Attalica*, Cic., *Verr.* 2, 4, 27–28). This technique was copied by Roman craftspeople, but presumably Pergamum continued playing a leading role in producing and trading *Attalica* (Blümner 1869, 38).

Rich Romans imported gold-woven textiles to Rome. Cnaeus Pompeius Magnus established the first public park in ancient Rome, the *porticus Pompeiana* around 52 BC at his own expense (Gleason 1990, 4–13 and 1994, 13–27), and Propertius (*Elegies* 2, 32, 11–12) reports on this luxurious colonnade with fountains, shady gardens, rows of plane trees and the canopy of woven gold cloth, the *Attalica aulaea*, which hung in the colonnades. The Roman praetor Caius Cestius Epulo was the owner of the well-known pyramid-shaped tomb on the *Via Ostiensis* in Rome erected at the end of the 1st century BC (Ridley 1992). The inscription (*CIL* 6, 1375) on the two marble bases which were found next to the pyramid declare that C. Cestius possessed precious textiles with woven-in gold threads (*Attalica*), and he wanted his corpse to be wrapped in them. According to the inscription, however, this was forbidden by a recent and unspecified Aediles' Edict (*CIL* 6, 1375: "... *Attalico(rum) quae eis per edictum aedilis in sepulcrum C(aei) Cesti ex testamento eius inferred non licit*"). Consequently, his heirs sold the valuable cloths, and from the amount received they erected the marble bases with two colossal bronze statues (Walser 1993, 50). The size of the fragments of the bases attests that the *Attalica* must have been worth a great sum.

While gold weaving was known in Asia Minor long before the Attalids, the origin of using gold threads in fabrics remains unclear. The earliest finds and records point to the east. According to Pliny (*NH* 19, 57), the Near Eastern kings were the first to use gold weaving. The Phrygians seem to have learned this technique from the Babylonians and Assyrians, bequeathing it to the Lydians. Lydian gold (-woven) chitons are mentioned in literature (Λύδοι χρυσοχίτωνες, χρυσοστήμοναι χιτώνες; Joh. Laurent. Lydus, *De Magistratibus Populi Romani* 3, 64 citing Peisandros, most likely the Rhodian poet of the 6th century BC). The Etruscan kings seem to have inherited their insignia from the Lydians. According to Dionysius (Dionys. Hal., *Ant.* 3, 61, 1) a delegation of defeated Etruscan cities brought Tarquinius Priscus, the Etruscan king of Rome, the symbols of sovereignty, with which they used to decorate their own kings, including a purple tunic decorated with gold (χιτώνά τε πορφυροῦν χρυσόσημον) and an embroidered purple mantle (περιβόλαιον πορφυροῦν ποικίλον), like those the kings of Lydia – and later Persia – used to wear (οἷα Λυδῶν τε καὶ Περσῶν ἐφόρουσιν οἱ βασιλεῖς), but it was not rectangular but semicircular and was called *τήβεννον* by the Greeks and *toga* by the Romans. Tarquinius Priscus (616–578 BC) was said to have worn a *tunica aurea* celebrating the first Roman triumph (Pliny, *NH* 33, 19 citing Verrius). After the fall of Sardeis, the Persians inherited the luxuriousness and good living of

the Lydians (Ath. 12, 514c; Her. 1, 50. 71. 135), and the Great King dressed in purple (Xenophon, Cyr. 1, 3, 2; 2, 4, 6; 8, 2, 40) and cloth of gold (Qu. Curtius Rufus 3, 3, 17). The Achaemenid Empire now was largely responsible for the production and dissemination of luxury garments, including gold-woven textiles which were likely still produced in Sardeis.

The earliest archaeological remains of textiles using metal threads are dated to the 5th and 4th centuries BC and derive from Greece (Koropi; Beckwith 1954) and South Italy (Taranto; Gleba 2008, 65). The local eastern kingdoms of Graeco-Persian culture imitated the courtly way of the Achaemenids and, therefore, it is not surprising to find some gold thread remains in the area of the Hecatomnid, Macedonian and Bosporean Kingdoms in the 4th century BC (Gleba 2008, 65–75).

In the area of the Mausoleum of Halicarnassus, in a chamber grave dated to mid-4th century BC, several gold ornaments were found, among them “a large amount of fine gold threads (...), made from hammered gold foil cut into strips, 0.02–0.1 mm wide, some even smaller. They are proof that a cloth or a dress woven with gold was part of the burial. The threads appear wrinkled, showing the imprint of warp-threads, which were presumably of wool” (Fig. 11.4a; Rasmussen 1994, 67). As additional information for Halicarnassus, we have the narration of the Knights of St. John in 1522: According to the French scholar Claude Guichard (1581) they found a grave which was robbed overnight, and only “small pieces of cloth woven with gold thread and with gold ornaments” remained (Rasmussen 1994, 68). The gold ornaments attest that the gold-woven cloth was additionally decorated with gold appliqué. We do not know what the textile looked like, nor if it were a garment or a blanket, nor to whom it belonged, but presumably to the satrap Maussollos himself or another Carian noble from the dynasty of the Hekatomnids. For comparison purposes, we possess the very well preserved gold and purple textiles from the golden larnax of the so-called grave of Philipp II at Vergina dated to the third quarter of the 4th century BC (Andronikos 1984, 164, fig. 140; Drougou 1987).

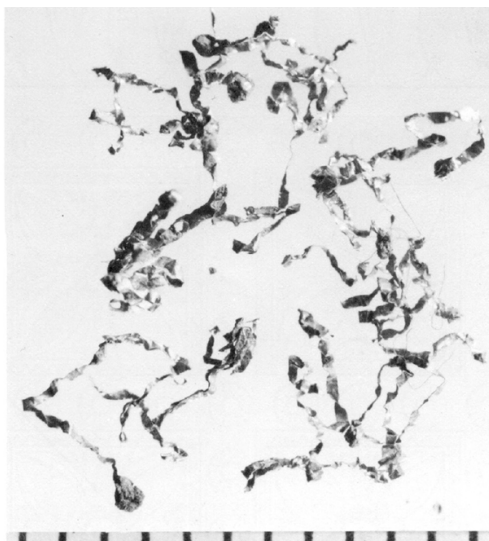
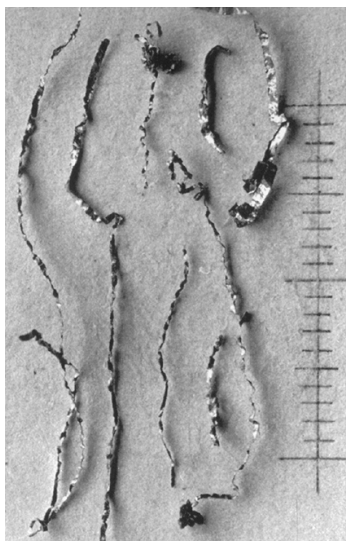


Fig. 11.4. Gold threads from textiles: left – Area of the Mausoleum of Halikarnassos (after Rasmussen 1994, 67); right – Philadelphia, Roman sarcophagus. (After Greenewalt 1980, 142, fig. 4).

The local eastern kingdoms were the forerunners of the Hellenistic kingdoms, and thus the Attalids took over a long and well-established tradition of producing exclusive garments, with Sardeis continuing as the production centre. It is likely that the gold-woven textiles of Pergamon “attest a survival or revival of the Lydian gold-weaving tradition” (Greenewalt-Majewski 1980, 136; see also Rostovtzeff 1923, 380–381).

“The only direct evidence for gold-woven fabrics in Lydia is a small assemblage of loose gold threads which were retrieved from the bottom of a Roman sarcophagus (...) unearthed in 1972 at the site of Philadelphia (...). All threads are flat strips, ca. 2–3 mm wide, of thin gold sheet (...); although considerably twisted and bent they do not appear to have been wrapped around a core or to have been backed with another medium.” They “possibly are the remnants of a genuine *Attalicum*” (Greenewalt-Majewski 1980, 137; Fig. 11.4b).

Textile Producers and Merchants

Many other towns in the Lydian area are mentioned in connection with textile production: inscriptions refer to the wool workers (ἐργουργοί) of Philadelphia (CIG 2, 3422) and Thyateira (λανάρτοι, TAM 5, 2, 1019); the *synergia* (professional associations) of wool and linen or towel weavers of Ephesos (IEph 2446; SEG 4, 541);⁹ the guild of flax workers (συμβίωσις τῶν συππινάδων) of Smyrna (Forbes 1956, 38; Drexhage 2007, 176 with references); and the textile dyers of Pisidian Sagalassos (IGR 3, 360). There are reports about wool and linen weavers of Saïtai, the weavers of Hypaipa and the linen workers, fullers and purple-dyers of Aphrodisias (Pleket 1988, 31–32; Reynolds 1997, 523–528; Poblome 2004, 493). Mattresses and pillows of coarse linen were produced at Tralleis (Poblome 2004, 493).

There is also some evidence regarding the social activities and status, the contacts and trade routes of individuals connected with textile production and textile trade. Some of them are examined more closely below (Fig. 11.5).

THYATEIRA

Saint Lydia of Thyateira

St. Luke in the *Acts of the Apostles* (16, 11–15) recounts the story of a woman named Lydia of the 1st century AD. Her name – if it was her real name – refers to her homeland, Thyateira. This city in northern Lydia is located on the road from Pergamon to Sardis, on a tributary of the Hermos River and near the harbour of Smyrna. The population of the Roman city of Thyateira primarily descended from Macedonian soldiers settled there by Seleucus I Nicator, who had newly founded this city on the place of a former Lydian town at the beginning of the 3rd century BC. St. Luke calls Lydia a πορφυρόπωλις, a seller of textiles dyed with purple, from the city of Thyateira (Acts 16, 14). She is reported to have migrated to Philippi to carry on her trade (Acts 16, 12). The Macedonian colony of Philippi was founded and renamed by Philipp II in the place of a former Thracian settlement. Within a few years after the Battle of Actium in 31 BC, the city was re-founded as *Colonia*

Julia Augusta Philippensis. From this time, the city had a much more Roman character than other *coloniae* of Asia (Pilhofer 1995, 91). The Roman Philippi became rich and also gained in importance as it is situated on the Via Egnatia, the main traffic artery between Rome to Byzantium crossing the Balkans (Fasolo 2005). As a flourishing town, it was also a favoured domicile for discharged Roman legionnaires to conduct their businesses, and it was a perfect market for selling expensive clothes, where a wider stratum of local society could afford to buy luxury goods.

It was around AD 48 that Saint Paul came to Philippi. He himself was a σκηνοποιός, a tent-maker from Tarsos in Cilicia (*Acts* 18, 3; *Clem. Alex., Paed.* 2, 10, 239), from where a great deal of linen products were exported (*Ed. Diocl.* 26, 17 sq.) and where the *cilicium*, a felted fabric of long goat hair was produced, too (Blümner 1869, 30 with references). Lydia granted hospitality to Saint Paul and his attendants (*Acts* 16, 15) and converted to Christianity¹⁰.

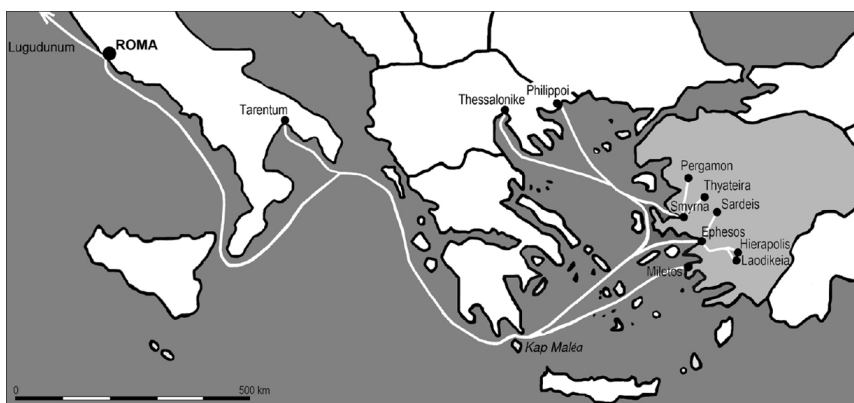


Fig. 11.5. Textile trading routes as described in the sources. (Drawing: Isabella Benda-Weber).

Lydia herself, trading in purple-dyed textiles, was a well-to-do woman, the head of her household, leading her own business with employees (*Acts* 16, 14–15). Since Greek inscriptions distinguish between πορφυρόπωλις/πορφυροπώλης (purple-seller) and πορφυροβάφος (purple-dyer),¹¹ it therefore can be assumed that she was not a textile worker (Pilhofer 176 and 177).¹² Perhaps she had her own dyeing workshop, too, and was a member of the guild of purple dyers from Thyateira, but this falls into the realm of speculation.

Menippos of Thyateira

An inscription from Thessaloniki dated to the end of the 2nd century AD attests the guild of the πορφυροβάφοι, the purple-dyers, who honour Menippos Severos, son of Amias, the Thyateiran (*IG* 10, 2, 1: Edison 1972 no. 291; Pilhofer 1995, 176; Lang 2009, 34). He is the only member of the guild in Thyateira who is known by name.

Antiochos of Thyateira

Since its first publication in 1897 (Mertzides 1897, 186–189 no. 29), the

inscription (697/M580) from Philippi, which refers to a certain Antiochos, son of Lykos, the Thyateiran, has unfortunately been lost. Antiochos was the first of the purple dyers (πορφυροβάφοι) honoured as a benefactor (εὐεργέτης) to the city. Pilhofer pleads for its authenticity after a comprehensive discussion (Pilhofer 1995, 176.182; 2000, 692–693 no. 697), not least because there exists documentation of an inscription by Lambakis (1906), which could very likely be a fragment of 697/M580 (Pilhofer 1995, 181).

Another fragmentary inscription from Philippi referring to *[pu]rpurari* (CIL 3, 664; Pilhofer 1995, 176), is considered further testimony for the existence of dyers or sellers of purple working in Philippi.

All the above-mentioned documents prove the existence of guilds of purple-dyers in Thessaloniki and Philippi with honoured members from Thyateira. The connection between these two regions can be explained by the Macedonian re-foundation of Thyateira and Philippi. Thus, we have evidence of a centuries-long trading network of purple textiles between Asia Minor and Macedonia.

HIERAPOLIS

Titus Flavius Zeuxis of Hierapolis

A tomb in Hierapolis has the following inscription (CIG 3, 3920) above the entrance: “Titus Flavius Zeuxis, the merchant, who travelled 72 times around Kap Maléa to Italy, built this tomb for himself and his children, Flavius Theodoros and Flavius Theudas and for whom they may wish to assign a place” (Ramsey 1904, 324–335; Humann et al. 1898, 92). This inscription attests to a local Greek trader with Roman citizenship from Hierapolis in the 1st century AD. It does not say what he was exporting to Italy, but it could well have been high-quality textiles the city was so famous for producing (see also Drexhage 2007, 246). The number of his 72 business trips – i.e. 36 return trips – shows how flourishing his trade must have been, which was also reflected by the expensive tomb he could afford.

Marcus Aurelius of Hierapolis

The inscription of a sarcophagus dated to the 2nd–3rd century AD from Hierapolis mentions Marcus Aurelius, son of Alexandros Moschianos, the purple-seller (πορφυροπώλης), who was also a member of council (βουλευτός) (Humann et al. 1898, no. 156). His membership in the city council (βουλή) indicates social respectability and implies a financial status which reveals him as a wholesale trader; the compatibility of trading operations and the affiliation to the urban upper-class is well-known from the western provinces (Drexhage 2007, 127).

Menandros of Hierapolis

A grave inscription (2nd cent. AD) from Rome names a certain Menandros, who had originated from Hierapolis, but who died in Rome (CIG 3, 3926). Perhaps he, too, was a merchant, dealing in textile products from Asia to Italy, as Drexhage (2007, 246) suggests.

LAODICEIA

Iulius Verecundus of Laodiceia

On an inscription from Lugdunum (Lyon; mid-2nd to 3rd century AD), Iulius

Verecundus is named as a *negotiator Laodecenarius* (CIL XIII, 2003; Drexhage 2007, 246). Rougé (1977) interprets Verecundus as a man originating from Laodikeia on the Lycus trading in *Laodicena*, the special garments named after this city (Meijer 1992, 107), or merely textiles made of the excellent Laodicenan wool (see above and Strab., *Geogr.* 12, 7–16). The inscription does not reveal if Verecundus was a textile producer, too. If these *Laodicena* were produced in Asia Minor, this inscription documents how far the inter-regional textile trade reached (Drexhage 2007, 133; Wierschowski 2001, 342 no. 471).

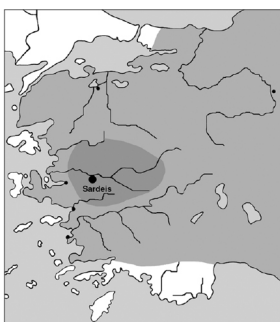
Conclusion

We have seen that the combination of resources, traditional knowledge and experience, combined with an efficient structure of concentrated efforts led to a synergy effect and benefited the production of textile products of high quality, quantity and diversity in Asia Minor over a long period of time. The Roman Empire and the *pax Romana* provided the framework for trading around the Mediterranean and beyond; the mobility of the traders and producers, carrying their know-how with them, enabled them to find the most optimal places of production and distribution areas. The toponyms of origin remained with the products guaranteeing constant quality. The distribution of those articles enhanced prosperity for both buyers and sellers and led to economic wealth in Asia.

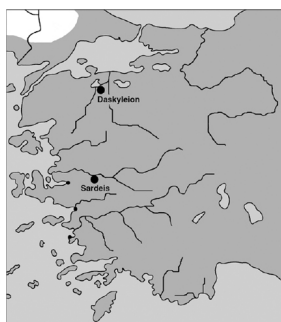
The Roman emperors could not have worn bright robes made of the finest wool or other materials, dyed purple or bright red, woven as brocade and with gold threads and decorated with small gold plates and gems (Hist. Aug., *Commodus* 8, 8; Herodian 5, 2, 6; Hist. Aug., *Elabagal* 26, 1; Hist. Aug., *Gallienus* 16, 4), as there was not a long tradition for them in Asia Minor. The constant refinement and developing knowledge concerning textile production was transmitted from the Neolithic and Bronze Age cultures to the Phrygians from Gordion, the Lydian Mermnads from Sardeis, the Persian Achaemenids, the Carian Hekatomnids from Halicarnassus, the Hellenistic Attalids from Pergamon and finally to the Romans (see Fig. 11.6), and it lasted until Byzantine times and even beyond.



Phrygian Empire (ca. 8th century BC)



Lydian Empire (heartland: 7th cent. BC, wider influence: until 541 BC)



Achaemenid Empire (ca. 550-330 BC with breaks)

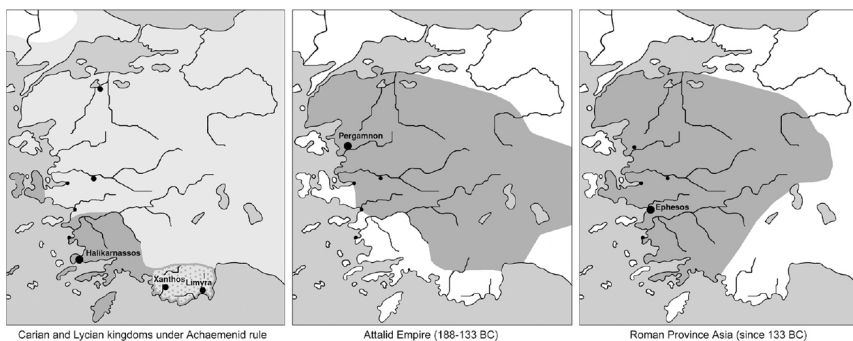


Fig. 11.6. Empires in Asia Minor from the 8th to the 2nd century BC. (Drawing: Isabella Benda-Weber).

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- 1 Kampagne 2011: Die Grabungen des Jahres 2011 im Kontext der bisher erzielten Resultate.5. Tavşan Adası 3 (TA3). In: Tavşan Adası: Archäologische Untersuchungen der Insel Tavşan Adası an der Westküste der Türkei. (<http://www.minoer.uni-halle.de/html/Kampagne2011.html>).
- 2 Furthermore, we are told that “of the inhabitants of Italy, the Sybarites gave the preference to the Etruscans and of foreigners to the Ionians, because they were devoted to luxury. But the cavalry of the Sybarites, being in number more than five thousand, used to go in procession with saffron-coloured robes over their breastplates” (transl. by Yonge 1854).
- 3 Contra manufacturing wool products for export in large quantities in Miletos: Hasebroek 1965, 58.
- 4 Possibly they dyed only the colour purple, using madder and the mineral waters according to Strabo (*Geog.* 13, 630; see following section).
- 5 Concerning the Turkish expedition of 2005 led by Celal Şimşek of Pamukkale University see: Excavations in ancient city of Laodicea, *Turkish Daily News* 13th Oct. 2005 and <http://www.pamukkale.edu.tr/laodikeia>, accessed 29th Dec. 2009.
- 6 Constantinidis 2008, 235, fig. 1 (mapped murex sites on the Asia Minor coast).
- 7 The island of Nisyros was called *Porphyris* because of its purple fishing (Eustath. ad Hom. *Il.* B 676; 318, 3 and Steph. Byz. s. v. *Νίσυρος*; Büchschütz 1869, 85).
- 8 The name “drill” derives from “drilling” like German “Drillich” or “Drell” and means three-threaded, as an add-on to two-threaded twill. The method of passing the weft thread over one or more warp threads produces a strong, heavy and durable fabric with a diagonal pattern. See also Tieser’s *Universal-lexikon* 19, Altenburg 1865, 772–773.
- 9 This inscription was found at the Vedius Gymnasium; Börker 1979, no. 454. For the textile tools from the Terrace Houses of Ephesos, see Trinkl 2007, 81–86.
- 10 As St. Paul and Silas reached Philippi coming from the Troas, this location was the first in Europe where they preached, and Lydia was the first of a group of women who converted (*Acts* 16, 13–15), so she is commonly considered as the first recorded convert to Christianity in Europe.
- 11 In Latin, there exists only one word for both professions: *purpurarius/-a* (Richter-Reimer 1992, 132).
- 12 The question of whether Lydia was a worker in a dirty dyeing factory or a rich business woman is discussed by Lang 2009, 29–44.

12. *Ulula, Quinquatrus* and the Occupational Identity of *Fullones* in Early Imperial Italy

Miko Flohr

Introduction

There is little reason to doubt that, in the construction of personal and social identities in the Roman world, an important role could be played by one's professional activities: what you did for a living often helped define who you were, how you saw yourself and how you were perceived by others. This is not only true for modern society, but also for the Roman world, and, indeed, for any complex society. The importance of professional activity for personal identity has left many traces in our material and textual records from the Roman world. Throughout the Roman Empire, epitaphs specify not only the name of the deceased, but also his or her profession; similarly, people making a dedication to the gods often chose to mention their profession alongside their name in the inscription commemorating their act of piety.¹ Indeed, some family names, such as *Sutorius* or the *Fullonius*, which occasionally even belonged to prominent members of the Roman elite, actually were derived from occupational titles (*sutorius*: e.g. *CIL* 6, 5723–5724, 27035–27040; *fullonius*: e.g. *CIL* 5, 8973; *CIL* 8, 3657–3658). At Pompeii, craftsmen repeatedly used their professional identity to persuade others to vote for certain candidates.² Moreover, there is also a great deal of evidence of people involved in the same profession or in related professions grouping together and founding associations – a *sodalitium*, or a *collegium*, or a *corpus*.³ Thus, 'work' and 'identity' in Roman urban communities were often inextricably linked and, in recent decades, scholars have come to acknowledge the role played by occupations in personal and group identity.⁴

Yet, the question of how exactly these occupational identities were construed and maintained has received much less attention: it is generally assumed that such identities played a role, and that they were important for the people able and willing to embrace them, and while few would dispute that such identities were by nature fluid and dynamic, the processes and strategies involved in shaping them have not really been part of the debate. This chapter aims to shed some light on this issue, focusing on the construction of the occupational identity of one specific category of textile craftsmen: *fullones* (fullers).⁵ These craftsmen, who played an essential role in the textile economy – both in refining newly woven clothes and the care and maintenance of used clothes – degreased clothes with alkaline chemicals, removed stains and pollution, and polished the surface so that it felt smooth, looked regular, and preferably, had a bit of a luster, too. In other words: a good *fullo* ensured that the garments treated in his workshop looked good and

were comfortable to wear.⁶

It must be said that *fullones* have quite a reputation in modern scholarship. They have been deemed to be – especially by classical philologists – socially marginal, involved in a dirty business, and a frequent and easy target of social mockery and derision.⁷ The notoriety of *fullones*, however, is not completely justifiable on the basis of our evidence. Indeed, on closer inspection, it seems to reflect modern sensitivities rather than ancient cultural tensions: there is little that suggests that *fullones* were thought worse of by elite authors than other craftsmen, and their workshops could be integrated into urban space without much trouble (Flohr 2007). Moreover, the many inscriptions left by *fullones* or those commemorating them suggest that they could have, and often had, a strongly developed occupational identity: *fullones* did not have to be ashamed of themselves or conceal their occupation.

The basic question discussed in this chapter, thus, is how those *fullones* willing and able to embrace their professional background could use it. I will particularly focus on the ways in which these craftsmen used the ritual activities in which they were involved, and the religious symbols with which they were associated, to shape their personal and collective identities and to communicate these identities to the wider urban community. In the case of *fullones*, this particularly concerns two aspects of the ties of these craftsmen to their protective deity Minerva: one is the repeated association of fullers with the sacred owl of Minerva, the *ulula*; the other is the role of *fullones* at the *quinquatrus*, the annual festival in honour of Minerva.

The Infrastructure of Identity

A crucial issue that needs to be borne in mind is that occupational identity is something that is construed and maintained through the various social interactions of daily life, and that the social arena in which daily life takes place is a decisive element in this process.⁸ This social arena may be thought of as an indispensable ‘infrastructure of identity’. Thus, before we can understand the role of the *ulula* and the *quinquatrus* in the identity of *fullones*, we need to consider the spatial environment in which fullers spent most of their days: the workshop. A considerable part of the occupational and personal identity of *fullones* was directly related to this very place and was, in all probability, constructed in the social interaction taking place on the shop floor – in the daily conversations among workers and in the eventual encounters between the staff and outsiders, such as customers or passers-by. The identity of fullers was also related to, and could be reflected in, the physical appearance of the workshop itself and its relation with the outside world.

Remains of *fullonicae* have been identified in several places throughout the Roman world, although most of the best preserved evidence essentially derives from two sites: Ostia and Pompeii.⁹ Standard elements in the layout of these workshops include the fulling installations (‘stalls’), in which the clothes were treated with alkaline chemicals (Fig. 12.1), and basins, generally connected to the urban water-supply, in which they were rinsed (Fig. 12.2).¹⁰ As might be expected, there are significant differences among the *fullonicae* in the archaeological record and some of these differences are likely to have had important consequences for the social lives of the people involved. For the sake of brevity, we may distinguish

three groups of *fullonicae*: small *tabernae* with a fulling workshop of modest size and capacity, which make up the vast majority of the workshops, a couple of medium-sized *fullonicae* situated in Pompeian *atrium* houses and a total of five large-scale fulling factories at Ostia, Rome and Florence.

Small *tabernae* with a fulling workshop are likely to have had a limited work force, although a minimum number of two workers seems to have been the rule: fulling facilities are always found in sets allowing at least two people to work alongside one another.¹¹ Most *tabernae*, especially those at Pompeii, seem to have had their own living rooms behind or above the shop. In these establishments, working and living were combined, which implies that the people working in the *fullonica* also shared their private lives with each other and formed a well-defined and probably rather tight-knit and small social group. At the same time, the fulling installations, which were typically situated inside the shop, were, in most cases, well visible from the street, and workers were clearly recognizable by passers-by or customers as being involved in fulling. A good example is the situation in *fullonica* VII 2, 41 in Pompeii, where fulling installations were found directly next to the entrance (Fig. 12.3). It is important to note that the people working in the fulling stalls could also look back: from their position, they could see a large section of the street (Fig. 12.4). This constant view of outsiders is likely to have enhanced the identity awareness of the people working in these *tabernae*.



Fig. 12.1. Pompeii, shop V 1, 2: three fulling stalls. (Photo: Miko Flohr).



Fig. 12.2. Pompeii, house VI 14, 21–22: Rinsing complex with three basins. (Photo: Miko Flohr).

The *fullonicae* in Pompeian *atrium* houses were two or three times larger and involved more people. Although two of the three workshops in this group had a shop, the main working areas were hidden away in the backyard and invisible to outsiders (Fig. 12.5). Yet, these work areas were relatively small and intimate: people could look each other in the eye and could start conversations involving the entire work group. The presence of fully-equipped kitchens suggests that the houses were inhabited, and that the workers, or most of them, were part of the household, the core of which may have been formed by a family.¹² For those who worked in the shops at the front of the house, again, the occupational background was clear to anyone, as is also indicated by the painted election notices surrounding the entrances to these shops in two of the domestic *fullonicae* of Pompeii.¹³ While this may have been less the case for those usually working in the main working areas in the backyard, the relatively small size of the total work force and its probably rather coherent nature made it easy for these people, too, to develop a relatively strong public occupational identity.

The *fullonicae* of the third group, however, employed large groups of workers, and the individual work places were organized in long rows, which minimised the possibilities of interaction between large groups of people (Fig. 12.6). The large scale of the workshop and the size of the work force (50–100 people) are likely to have made the social atmosphere rather anonymous, and social ties between individual workers probably were much looser than in smaller *fullonicae*. Moreover, none of these factories was directly related to any living accommodation, and it is highly likely that factory workers lived dispersed over the city and did not share much more than their daily work (Flohr 2009, 181–183). Furthermore, these *fullonicae* did not have a shop and were completely closed off from the surrounding urban environment, so that workers were not

publicly recognisable as being involved in fulling. Arguably, such circumstances do not favour the development of a strong public occupational identity. Indeed, they may rather have promoted what Marx has called *Entfremdung*, although it cannot be excluded beforehand that these people identified themselves with their job in the factory and based part of their social profile on it.¹⁴

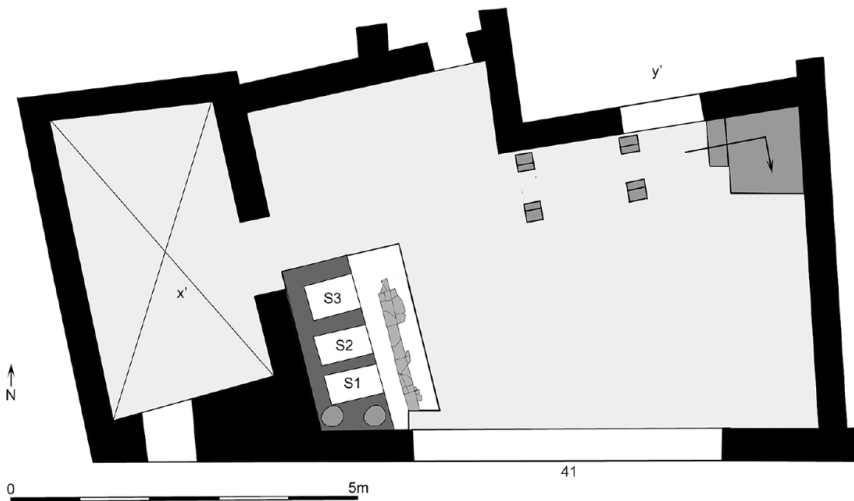


Fig. 12.3. Pompeii, shop VII 2, 41: map. (Miko Flohr).



Fig. 12.4. Pompeii, shop VII 2, 41: view from stalls. (Photo: Miko Flohr).

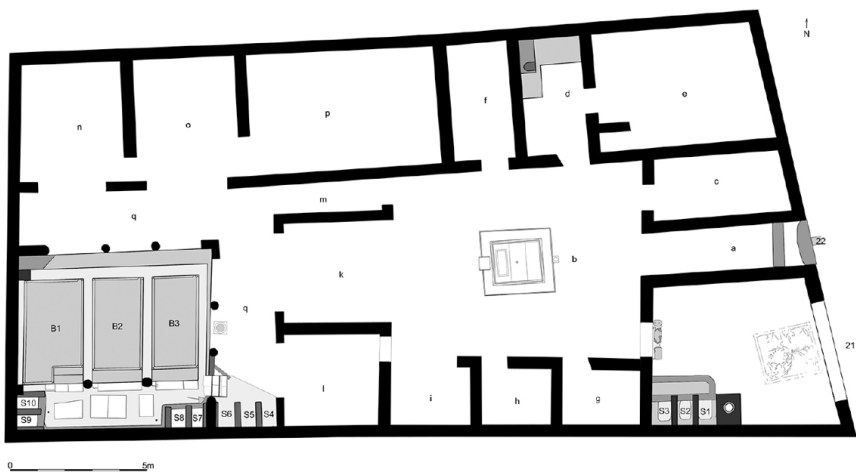


Fig. 12.5. Pompeii, house VI 14, 21–22, map. (Miko Flohr).

It is also important to note that, apart from communicative differences, there are likely to have been fundamental differences in the division of labour among these three workshops. In small *tabernae*, the range of activities performed by each individual worker may have been much larger than in the *fullonicae* in *atrium* houses, where the larger size of the work force and the division of the staff over two areas prevented an all too flexible approach. In the industrial *fullonicae*, the large numbers of people involved in the daily work made the division of labour rigid by nature. This also had an impact on the degree to which workers were able to become acquainted with all aspects of the craft and, thus, could acquire the skills associated with a fully experienced *fullo*. In that respect, it is also worth noting that the large *fullonicae* do not seem to have provided a place for the finishing phases of the process, which are likely to have been those requiring the most skill (Flohr 2009, 176–178). The people working in these establishments thus could not really aspire to learn the craft, which makes them resemble modern factory workers even more – they were muscles, not artisans, and this may have further limited the degree to which they embraced the occupational identity of the *fullo*.

Using the Occupational Title

It is important to be aware of these differences in the archaeological material, and their consequences for the way in which people saw their work as part of their personal identity and their occupation as part of a certain group identity. This differentiation is perhaps reflected in the use of the occupational title *fullo* in the written record. Theoretically, all those working in a *fullonica* may be called *fullo*, but in practice, this seems to have differed. It may be relevant to note that there is no epigraphic evidence at all for *fullones* in Ostia, and that most of the *fullones* known from the epigraphic and literary record elsewhere in the Roman world seem to have operated either commercially or within the household staff of large families.¹⁵ It is thus highly possible that people working in industrial fulling

factories did not call themselves *fullones*. At Pompeii, it seems that the use of the term was often limited to the man in charge of the establishment. For example, on the façade of the medium-sized *fullonica* VI 14, 21–22, where definitely more than one person worked, election notices mention the advice of only one *fullo*, a certain Primus (*CIL* 4, 3478). This corresponds well with legal texts, in which all the responsibilities of the workshop in the end lies with one *fullo*, and in which other members of the workshop are referred to by different labels, such as apprentice (*discipulus*, *Digests*, 14.3.5.10).

Thus, not all of those involved in fulling saw themselves or were seen by others as a *fullo* in the same way, and there may have been differences between fullers in the role that their occupation played in their personal identity. Yet, for those *fullones* who actively embraced their professional background, there were some ready-made symbols and stereotypes that could be used in the construction and communication of their identity. The question at stake here is how these symbols and stereotypes actually worked.

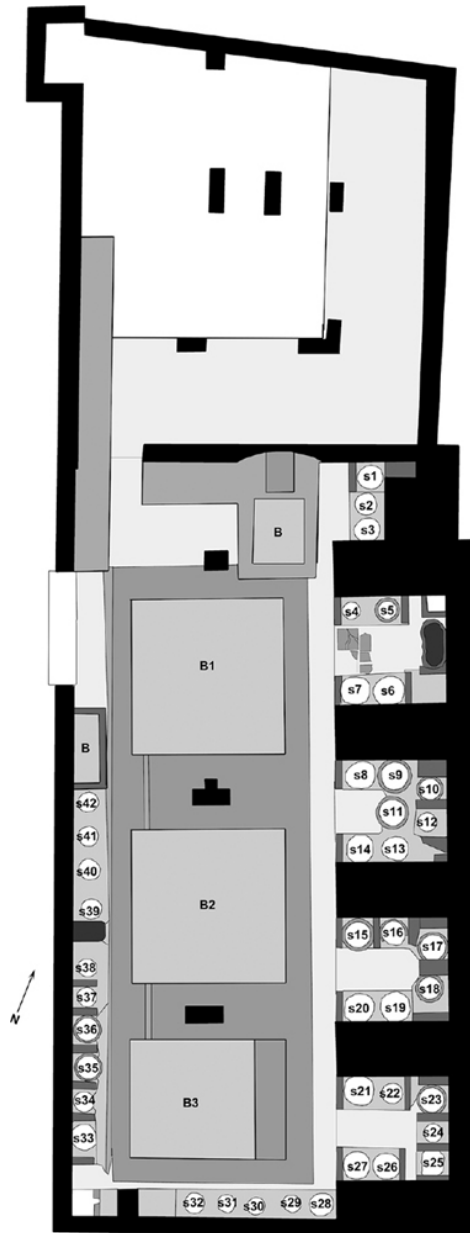


Fig. 12.6. Ostia, fullonica II XI 2, map. (Miko Flohr after Pietrogrande 1976).

Ulula

One of the most prominent symbols related to *fullones* seems to have been the owl of Minerva, the *ulula*. Although Minerva was the protective deity of a wide range of artisans, the only craftsmen explicitly associated with her sacred bird were the

fullones. The symbolic relationship between the *fullo* and the *ulula* is particularly apparent at Pompeii, where the craftsman and the bird are associated with each other through a couple of graffiti and several paintings.

The best known graffito relating *fullones* with the *ulula* is the parody on the first lines of Virgil's *Aeneid*:

fullones ululamque cano, non arma virumque.

I sing of the fullers and their owl, not of the weapons and the man (*CIL* 4, 9131).

The text, now lost, was found on a façade scratched beneath a depiction of Aeneas and the election notice of a probable *fullo* who called himself Fabius Ululitremulus – which means something like ‘Fabius the owl-fearer’ (*CIL* 4, 7963). The existence of these texts, and the other epigraphy on the façade, allows us to assume that the unexcavated building behind it (IX 13, 5–7; Fig. 12.7) contained a fulling workshop. Perhaps, the author was one of the people working there or had close ties with them – in any case, he seems to be familiar with (and supportive of) their occupational identity. It is important to point out that the graffito was, according to the *Corpus Inscriptionum Latinarum*, less than 2 cm high and thus barely legible unless one stopped and had a look at it. While the *cognomen* Ululitremulus may be thought to publicly advertise the ties between *fullo* and *ulula*, the graffito does so in a different, less visible way, perhaps as part of an internal dialogue of those involved in the business themselves or the people around them. The *ulula*, it seems, also played a role within the inner circle of one specific workshop.



Fig. 12.7. Pompeii, unexcavated house IX 13, 5–7, façade. (Photo: Miko Flohr).

The other texts linking *fullones* and *ululae* were part of a large group of graffiti found on a pillar in the peristyle of a private house elsewhere in the city (House V 2, 4: *CIL* 4, 4110–4118). They were all written by one and the same person, a

certain Lucius Quintilius Cresces, who repeatedly calls himself a *fullo* (CIL 4, 4100, 4102–4104, 4106–4107, 4109). In most of these texts, Cresces sends his greetings to a certain group of people, including the inhabitants of Pompeii and nearby Surrentum. Several greetings are directed at other *fullones* and in one of these he greets not only the fullers, but also their owl:

Cresces fullonibus et ululae suae sal(utem) dicit.

Cresces sends his greetings to the fullers and their owl (CIL 4, 4118).

Another one also relates the *fullones* to the *ulula*:

Cresces fullonibus / ullulaq(u)e canont.

Cresces ... to the fullers and the owl ... (CIL 4, 4112).

In both cases, the graffiti were accompanied by a scratched sketch of Minerva's holy bird, which has not been copied in the CIL, but which is still visible on the spot (Fig. 12.8). It may be observed that here, too, the graffiti seem part of a – real or imagined – internal discourse among *fullones* instead of merely being a public display of the symbolic ties between the *fullo* and the holy bird of his protective deity.

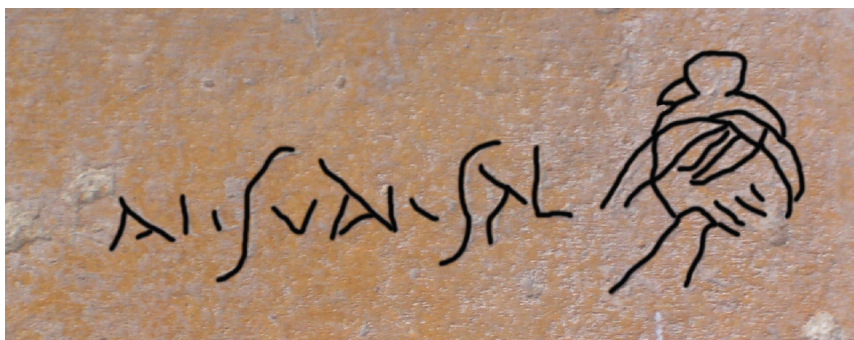


Fig. 12.8. Pompeii, house V 2, 4: graffiti on pillar in back yard, detail. (Drawing: Miko Flohr).

The analysis of the two paintings associating *fullones* with *ululae* results in a similar picture: a greater part of the discourse relating *fullones* to *ululae* was internally oriented – made by *fullones* for *fullones*. The better known painting depicting an *ulula* is the so-called pillar of the *fullones* found in the living quarters of one of the large Pompeian *fullonicae* (*Fullonica* VI 8, 20–21.2). Here, the owl was portrayed on top of the *viminea cavea*, the portable rack used for treating clothes with sulphur, in a scene showing several of the finishing stages of the process.¹⁶ The appearance of the *ulula* seems purely symbolical: it does not play any role in the production process. While the bird is of considerable size compared to the other elements of the scene, it is basically one among many details and does not really have visual prominence (Fig. 12.9). While the paintings as such may have had a function in communicating the occupational identity of the inhabitants of the house to visitors from the outside, the *ulula* plays a supporting role in this respect, for it is not impossible that the presence of the *ulula* provoked, and

perhaps even was meant to provoke, the most outspoken response from viewers having close affinity with the fulling business themselves. Perhaps, it is also significant that the *ulula* appears here in the scene with the workers performing the tasks demanding the most skill and not in the scene with the fullers trampling cloth on the lowest level on the same side of the pillar. This may, perhaps, suggest that the occupational identity was more clearly defined for people regularly involved in the more demanding tasks on the shop floor.

The *ulula* probably also figured prominently in scenes from another Pompeian *fullonica* (VI 14, 21–22). These paintings are now almost completely lost, but 19th-century drawings and descriptions allow for a reconstruction.¹⁷ The depicted scenes are complex and are hard to fit into one clear interpretive framework, but the role of the *ulula* seems rather unambiguous. The bird is not recognisable as an *ulula*, but given the whole ongoing discourse, it is unlikely that it was another kind of bird. It figures twice (see Fig. 12.10). In one case, it sits on the top of a tree surrounded by people trying to make it move with long poles. Further to the right, two people carry a cage with an imprisoned specimen. This suggests that the people in the first scene are trying to capture the *ulula* in the tree. The meaning of this ritual of bird-catching is not entirely clear, but that is not what is of interest here. It is the location of the paintings that gives the scenes their full significance: they were found on the walls of the main working area of the *fullonica* in the peristyle of the house (Fig. 12.11), and it is highly likely that the most frequent viewers of the scenes were the people working in the establishment, who perhaps could associate themselves with the people trying to catch the *ulula*. Thus, here it is obvious that the *ulula* is used in an internal dialogue among those involved in the fulling process themselves. Outsiders may, of course, occasionally have visited the working area in the peristyle, but they could only see and understand the paintings if they spent considerable time studying them, thus standing in the way of the people involved in the production process. Hence, the bird-catching seems to be depicted as one of the symbolic rituals that shaped the group identity of the members of the household that were involved in fulling.¹⁸



Fig. 12.9. Pompeii, house VI 8, 20–21.2, pillar with painted scenes of fullers at work. (Photo: Miko Flohr).

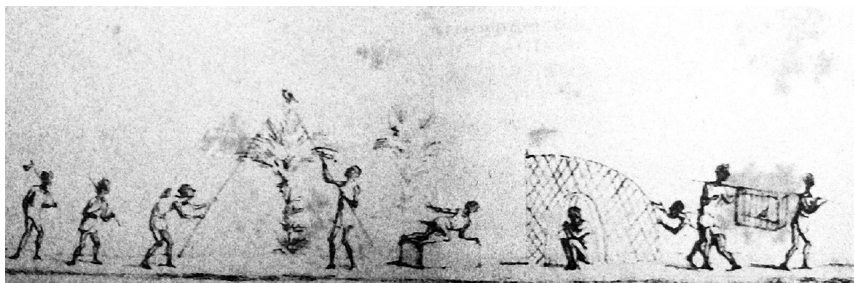


Fig. 12.10. Pompeii, house VI 14, 21–22, paintings from the south wall of the fullonica. (After Discanno 1875, fig. 3).



Fig. 12.11. Pompeii, house VI 14, 21–22, view through working area towards south wall. (Photo: Miko Flohr).

Quinquatrus

The epigraphic and iconographic evidence concerning the symbolic ties between the *fullo* and the *ulula* points to the importance of the social interaction among fullers themselves in the construction and maintenance of occupational identities. This is partially also true of the evidence relating *fullones* to the religious feast of the *quinquatrus* in mid-March.¹⁹ During this feast, the foundation of the Temple of Minerva on the Aventine was commemorated, and literary sources suggest that the *quinquatrus* were particularly relevant for craftsmen (see esp. Ovid *Fasti*, 3.809–848). Yet, again, the craftsmen most frequently associated in texts with the *quinquatrus* are the *fullones*, for example in a fragment by Novius, and, probably, in the description of the feast in Ovid's *Fasti*.²⁰ However, while the celebrations partially seem to have had a public character and thus inevitably formed a

platform through which the occupational identities of *fullones* and other craftsmen were communicated to the wider community, there also seems to have been a more private side to the ritual. A clear indication for this is given by Pliny the Elder, who refers to a painting by a certain Simias of the *officina* of a *fullo* celebrating the *quinquatrus* (Plin. *NH*, 35.141). Apparently, the *quinquatrus* was a feast that was also celebrated at the level of the individual workshop, which makes it not only an occasion for communicating occupational identity, but also one for identity building – and, perhaps, team building – for the staff of a workshop.

Conclusion

To sum up, the evidence discussed here makes it clear that the construction and maintenance of an occupational identity was not only a matter of craftsmen communicating to outsiders about who they aspired to be. The occupational identities of *fullones* were shaped, for a considerable part, in the internal discourse among the people involved, as can be seen at Pompeii, where both the level of the workshop and that of the assembled fullers of the community were important in this respect. In these everyday processes, the *ulula* seems to have been a powerful symbol of group identity, and religious feasts like the *quinquatrus* played a key role in team building, besides providing a platform for some public exposure of the occupational identity. However, it is not certain that all people involved in fulling shared this occupational identity to the same degree: circumstances in the industrial fulling factories in Rome and Ostia do not seem to have favoured the development of a strong emotional attachment to the craft of fulling and may have encouraged people to look beyond their occupation for their personal identity.

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- 1 The most thorough introduction to these 'occupational inscriptions' is found in Joshel 1992.
- 2 Mouritsen (1988, 63), who studied the Pompeian election notices, seems to downplay the relevance of these occupational specifications, but there would have been little reason to add the occupation if it had not enhanced or even damaged the credibility of electoral advice.
- 3 There is a great deal of literature on professional *collegia*. Of fundamental importance here is still Waltzing 1895; Waltzing 1896. See also Royden 1988; Van Nijf 1997; Dittmann-Schöne 2001; Zimmermann 2002; Tran 2006. Also see Liu in this volume.
- 4 This is not the place for an exhaustive bibliography, but relevant literature includes Joshel 1992; Van Nijf 1997; Larsson Lovén 2000; Petersen 2003; Barber 2007; Cuomo 2007; Cottica 2007; Potts 2009.
- 5 For recent discussions on fulling and its material remains, see Bradley 2002; Wilson 2003; Flohr 2003; Flohr 2005; Flohr 2006; Flohr 2009. A monograph by Flohr is currently in press (Flohr 2013).
- 6 For a discussion of the work that fullers did, see Flohr 2013.
- 7 See esp. Bradley 2002, for an overview of modern prejudices against Roman *fullones*. See Flohr 2013 for a longer discussion.
- 8 This is an interactionist point of view. See Charon 2009, 28–29 for a discussion of what is also referred to as 'symbolic interactionism'.
- 9 At Pompeii, eleven *fullonicae* can be identified: I 4, 7; I 6, 7; V 1, 2; VI 3, 6; VI 8, 20–21.2; VI 14, 21–22; VI 15, 3; VI 16, 3–4; VI 16, 6; VII 2, 41; IX 6, a.1. See Moeller 1976; Seiler 1992, 70–72; Flohr 2008a; Flohr 2008b. At Ostia, six: I xiii 5, II iv 5 [*taberna* 12], II xi 1, II xi 2, III ii 2, and V viii 3. See Pietrogrande 1976; De Ruyt 2001. Other establishments have been securely identified at Herculaneum (Maiuri 1958, 422), Fréjus (Rivet 2000, 259), Florence (De Marinis 1997), and, in Rome, on the Celian Hill (Pavolini 1992), on the Oppian Hill (Astolfi et al. 1990), and in Casal Bertone (Musco et al. 2008).
- 10 For the water management in these workshops, see Flohr 2006.
- 11 See Flohr 2009 for a detailed discussion of the communicative landscape of fulling workshops and the possibilities for interaction during the working day.
- 12 See Flohr 2013 for a discussion of the 'domestic' *fullonicae* of Pompeii.
- 13 *Fullonica* I 6, 7 (commonly known as the *fullonica* of Stephanus; *CIL* 4, 7164) and *fullonica* VI 14, 21–22 (*CIL* 4, 3476; 3478).
- 14 For Marxian '*Entfremdung*' or alienation and its role in sociology, see Grint 2005, 86–88; Maconis and Plummer 2008, 105.
- 15 Many inscriptions are related to senatorial houses or to the imperial family (e.g. *CIL* 6, 3970 (*Monumentum Liviae*); 4336 (*Monumentum Drusorum*); 6287–6290 (*Monumentum Statiliorum Taurorum*); 7281 (*Monumentum Volusiniorum*); others specify the location of the shop (e.g. *AE* 1958, 273). All legal texts assume *fullones* working for private clients cf. Robaye 1991. See also Flohr 2013.
- 16 For the term *viminea cavea*, see Apuleius *Met.*, 9.24.2.
- 17 See *PPM* VII s.v. 331; for the original, see Sogliano 1975b, 145–146.
- 18 The excavators saw these paintings as a depiction of the *Quinquatrus*, but this is not certain. Cf. Sogliano 1975a, 103.
- 19 For the *quinquatrus*, see *DS* 4.1 s.v. 802–804.
- 20 Novius *Virg. Praegn.*, fr. 1. For a recent interpretation of this text, see Welsh 2006.

13. A ‘Private’ Felter’s Workshop in the Casa dei Postumii at Pompeii

Jens-Arne Dickmann

Introduction

It was only after the earthquake of AD 62 that the Casa dei Postumii at Pompeii (VIII 4, 4.49) came into being. Heavy destruction in that area had forced the owner to level the ground by spreading the debris material and thus creating a terrain for the new *domus*. The small *atrium* (Fig. 13.1.2) which had already been constructed by at least the early 1st century AD was supplemented by a larger peristyle garden (Fig. 13.1 no. 12) with wide *cenationes* (Fig. 13.1 nos 20–21) at its southern end (Dickmann and Pirson 2002, 253–259). Hence the house – apart from its individual features – was in keeping with the conventional Roman idea of house plans. What is remarkable is the layout of the so-called kitchen (Figs 13.1 no. 22 and 13.2) in the north-eastern corner of the peristyle. The narrow, very long space was not laid out by chance but must have been planned deliberately. As a consequence, the peristyle acquired its abnormal form with the truncated edge and only three nearly identical porticoes in the north, west and south. The fourth one on the eastern side was instead much wider but also cut off at its northern end. Although this eastern portico is the widest of all, it does not offer access to any further living room. Instead, it has been truncated by the protruding space of the kitchen and was simultaneously separated from the northern corridor by a door. Thus, we can be certain that the dimensions of the kitchen were not the result of the chance reuse of a room of the former building but were rather determined by the owner’s decision to have a large kitchen space. Giuseppe Fiorelli who excavated this insula in 1861 described this room as the house’s “cucina, con la latrina, il focolare, un lungo poggio o tavola di marmo, una vasca di fabbrica, una grande fornace, e la nicchia de’ Penati” (Fiorelli 1875, 337).¹ From our vantage point, his idea of how a Roman kitchen may have looked like could only have been very approximate in those years, so he did not doubt his interpretation and was at least partially correct regarding the hearth and the closet.

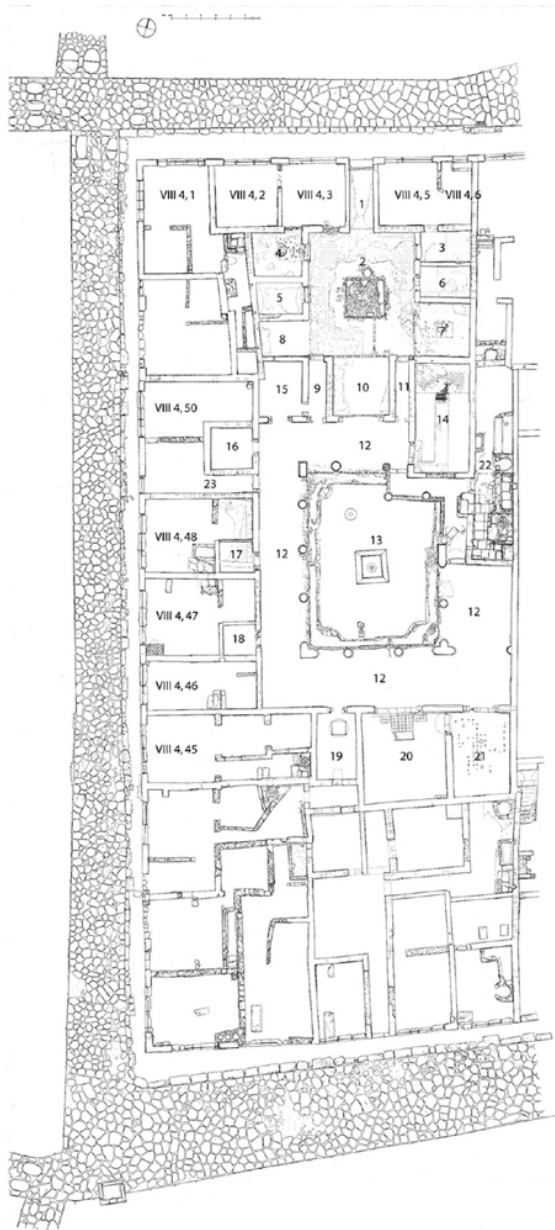


Fig. 13.1. Casa dei Postumii (VIII 4, 49), ground plan. (Map: Jens-Arne Dickmann).

Recently however, Pia Kastenmeier's publication *I luoghi del lavoro domestico nella casa pompeiana* has facilitated the comparative analysis of similar spaces (Kastenmeier 2007, 57–88). When we search for similar separated areas for the preparation of meals, we usually find them only in bigger houses, quite often

closely related to the reception rooms of the *domus* (Dickmann 1999, 267–274). A brief overview of these spaces investigated by Kastenmeier reveals that the so-called kitchen in the Casa dei Postumii not only exceeds the others within the same *insula* IV of *Regio* VIII in size (Kastenmeier 2007, 151 fig. 97), but is in fact one of the biggest known in Pompeii. Therefore, Kastenmeier rightly emphasises the different facilities compared to other kitchens. Not only the size but also the installations of heavy working tables and basins indicate multifunctional use. Based on a graffito, now lost but formerly documented by Fiorelli (1861, 52) that very probably tells us of 200 lbs of lard and 250 bundles of garlic, we suggested a small butchery and the domestic production of sausages (Dickmann and Pirson 2000, 454).² In contrast, Kastenmeier interpreted the installations as part of a textile workshop where fabric was washed and dyed (Kastenmeier 2007, 30. 150). While the former explanation as a private butchery seems easily referable to its use as a kitchen, the latter pre-supposes a somewhat strange situation of independent workmen standing side by side handling very different materials. To explore this issue further, a thorough re-examination of the archaeological context is needed.

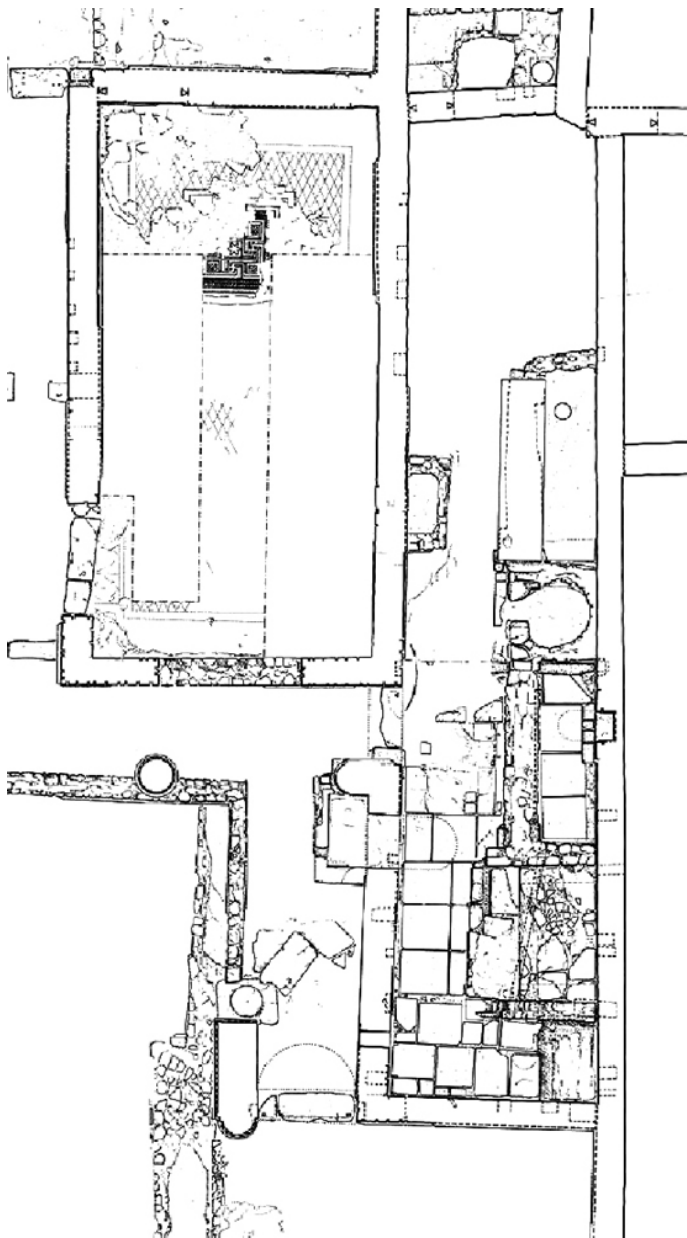


Fig. 13.2. Casa dei Postumii (VIII 4, 4. 49), ground plan of the so-called kitchen (22). (Map: Jens-Arne Dickmann).

The so-called Kitchen of the Casa dei Postumii

Separated from the garden area by a small fence-like wall (*pluteus*), the kitchen area was accessible only through a narrow corridor that formed the north-eastern

angle of the peristyle. The *pluteus* itself did not block people from entering the corridor from the northern portico but mainly operated as an architectural sign delineating the border between the ostentatious garden with its marble furniture and fountain on the one hand and the kitchen area run by slaves on the other.³ Instead, it was the door to the eastern portico at the south-western edge of the kitchen which was provided with a lock and key and thus served to separate this area from the main reception rooms. The placing of the threshold clearly shows that the doorway was to be opened and shut – and thus controlled – only from the service area (see below).



Fig. 13.3. *Casa dei Postumii* (VIII 4, 4. 49), hearth and latrine in the so-called kitchen (22).
(Photo: JensArne Dickmann).

The kitchen room itself was divided into three sections. In the southern part, we find the hearth on a high podium and below it the latrine in the remote angle of the room (Fig. 13.3). Without going into details here, it should be remembered that this compartment was originally hidden behind a thin wall of *opus craticium* and thus was accessible only through a small doorway. A window slit in the western wall provided illumination to the dark closet with its wooden ceiling. The sloping floor was paved with tiles and enabled the discharge to flow into the drainage channel underneath. The paving and the high podium of the hearth are clearly related to the regular use of water and fluids that were drained into the latrine. A terracotta pipe which was built into the podium connected a so-called basin on the left (north) side of the hearth with the closet's paved flooring which was cleaned by the fluids poured over it. A closer inspection of the so-called basin reveals its true character. The floor was only roughly paved with fragments of tiles, and the walls do not show the water-resistant plaster that is needed in the case of a regular refilling with water. Finally, the inner (western) wall seems far

too strong to serve only as a basin's side wall. At its edges towards the hearth and the oven in the north, it shows two T-formed buttresses that undoubtedly hint at its former function as a table support (Fig. 13.5). Moreover, this support shows the same measurements as the table support with its marble or limestone slab in the northern part of the room, a length of about 2.4 m and a remarkably thin wall of c. 0.25 m between the buttresses. Originally therefore, this workshop had two similar working tables that flanked a central oven of which only tiny traces remain.⁴

A small piece of a lead pipe in the southern wall of the oven (Fig. 13.4) confirms that its circular walls formerly had sheltered a deep cauldron which was filled with fresh water.⁵ This kind of oven is well-known and was used to heat fluids. The oven walls and the cauldron reached the same level. Any process of soaking or taking out materials would have been facilitated by the wide opening of the kettle, further supported by the lack of evidence of a heavy lid. Evidently, the work process depended on the liquids being at a constant high temperature. As will be demonstrated later, similar ovens are known from cleaning and dyeing workshops elsewhere, and are related to various kinds of textile processing.

The second large stone table to the north has already been mentioned. In this central section of the room, we could not find any traces of a floor paving. This is striking because at the table's north-eastern edge there is a vertical terracotta pipe of c. 0.17 m in diameter leading down into the same channel that also drained the latrine (see Fig. 13.6).⁶ Even if we are unable to ascertain how the floor of the central section was protected and the liquids were drained into the pipe, there is no doubt that the floor was splashed by running fluids. The walls again do not show any traces of higher reaching waterproofed plaster, thereby not providing sufficient proof for a convincing interpretation of it as a kind of basin. If these spaces behind the tables were not basins and did not contain large amounts of liquids, what purpose did they have? Comparing these tables with those of other workshops, there can be no doubt that these spaces were working places for individuals who had to jump over the tables (see below). The stone slab's width of c. 0.6 m would enable workmen to work from both sides of the slab. Due to the identical construction of both tables, they obviously served the same purposes.



Fig. 13.4. Casa dei Postumii (VIII 4, 4. 49), area behind the southern table support. (Photo: Jens-Arne Dickmann).



Fig. 13.5. Casa dei Postumii (VIII 4, 4. 49), southern table support. (Photo: Jens-Arne Dickmann).

The identical function of both tables is furthermore confirmed when looking at two smaller basins in and outside the kitchen. The smaller one inside the room was placed directly opposite the northern table at the western wall (see Fig. 13.7).

Similar to the cauldron in the oven, it was fed with fresh water through the aforementioned lead pipe that turned left (north) behind the threshold. At the north-eastern edge of that basin, a small hole is preserved that formerly discharged the liquids. These were drained into the vertical pipe on the other side of the table, passing the table support through another and bigger hole at floor level. Thus, even the floors of that section must have been repeatedly splashed with fluids. It was certainly cold water, perhaps used for rinsing fabrics in order to clean or wash them after they had been worked on the table. This is likely given the close proximity between table and basin. The workers only had to turn around to reach the latter. Although the second basin was located outside the kitchen, to the right of the entrance, it is evident that it served the same purpose (Fig. 13.8). The spatial organisation of the kitchen necessitated its placement outside the workshop, because a narrow corridor was needed to make the hearth and latrine accessible. Hence, an opening was constructed in the wall to enable soaking and rinsing from the inside. That the latter was possible is clearly demonstrated by the bronze inlet valve at the bottom of the basin and the overflow which was reconstructed in modern times. Thus, this enables us to reconstruct a working process that is organised around the oven as the central facility and replicated on both sides by the parallel installation of a large work table and a vat for soaking. Although textile processing seems indeed a probable explanation for this kind of workshop, the facilities could even be interpreted as being intended for small-scale slaughtering and the production of sausages. To solve this problem, we have to look at other workshops, two of which display close similarities.



Fig. 13.6. Casa dei Postumii (VIII 4, 4. 49), northern working table with large slab. (Photo: Jens-Arne Dickmann).



Fig. 13.7. Casa dei Postumii (VIII 4, 4. 49), northern basin. (Photo: Jens-Arne Dickmann).

However, before leaving the Casa dei Postumii, the northern section of the kitchen has to be considered. As there are no signs of permanent workshop installations here, we cannot be certain of how this area was used or indeed whether it was roofed. The east wall of the kitchen was heavily damaged during

the eruption of AD 79. Thus, we lack any information about windows or the way of illuminating this part of the house. However, the owner had deliberately decided not to have any fixed installations here. Therefore, it seems justified to think of a space that could be used temporarily for different purposes, an issue that will be discussed later.



Fig. 13.8. Casa dei Postumii (VIII 4, 4. 49), southern basin outside the kitchen (22). (Photo: Jens-Arne Dickmann).



Fig. 13.9. Workshop I 8, 19, oven in the courtyard. (Photo: Jens-Arne Dickmann).

Two Fulleries

Discussing the context of the Casa dei Postumii, Kastenmeier rightly pointed at the fullery in I 8, 19.⁷ This large-scale workshop consisted of two areas with different facilities. Both show a series of analogies to the installations in the kitchen of the Casa dei Postumii. Entering the courtyard from the narrow lane, a row of five ovens constructed in the same manner and still preserving remains of the cauldrons and feeding pipes can be seen (Fig. 13.9). At least three of them still have the openings which served to set the fire and heat the cauldrons. From this courtyard, a small staircase led down to the second part of the workshop which consisted of a souterrain hall lit by windows in the upper walls and a doorway in the back (Fig. 13.10). This door obviously offered access to an outer area of uncertain function. However, it should be noted here that this workshop also needed an outdoor area, which reminds us of the smaller section in the northern part of the kitchen in the Casa dei Postumii. In this cellar-like hall beside the staircase, another oven with its cauldron and pipe is preserved. Behind it, and placed along the walls, are two large and deep basins which were connected by a hole in the partition wall just above the bottom level. Two outlets into the central corridor also here allow us to interpret them as basins for rinsing materials. The long northern wall of the hall is divided into three compartments which closely resemble those in the Casa dei Postumii. Separated by high-reaching inner walls, the two compartments at the left are characterised primarily by two heavy stone tables which at first appear to constitute the walls of two deep basins. As already observed before in the kitchen of the Casa dei Postumii, here too, are several outlets that served as drainage for liquids into the central corridor. This construction does not make sense in the case of real basins that, due to the height of the tables, then must have been filled up with large amounts of liquid. None of the well-known *fullonicae* have these table slabs at the edges of their basins. Secondly, the function and purpose of the stone slabs remain unclear. How would they have been used when the back space was filled up with water? Instead, I propose an explanation that assumes a work process which caused a steady flow of water to be drained onto the floor. In the third compartment of I 8, 19 we lack the slab but we still have its supports which clearly show that this workshop originally had three tables, two big and deep basins on the opposite side of the corridor and at least one oven apart from those in the upper courtyard.



Fig. 13.10. Workshop I 8, 19, souterrain hall with oven, basins and working-tables. (Photo: Jens-Arne Dickmann).





Fig. 13.11. Casa della Regina d'Inghilterra (VII 14, 5. 17-9), back-entrance 17 and basins in the corridor. (Photo: Jens-Arne Dickmann).



Fig. 13.12. Casa della Regina d'Inghilterra (VII 14, 5. 17–9), dyeing vats in the north-western corner of the property. (Photo: Jens-Arne Dickmann).



Fig. 13.13. Casa della Regina d'Inghilterra (VII 14, 5. 17–9), felt-maker's workshop to the south of the dyeing vats. (Photo: Jens-Arne Dickmann).



Fig. 13.14. *Via dell'Abbondanza, facade IX 7, 7, fresco depicting goods being sold inside a shoemaker's shop. (After Spinazzola 1953, 208 fig. 238).*

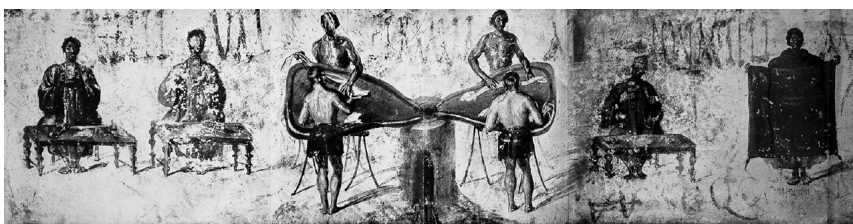


Fig. 13.15. *Via dell'Abbondanza, facade IX 7, 7, fresco depicting a felt-maker's workshop. (After Spinazzola 1953, 192 pl. 2).*

Another comparable situation is known from the so-called Casa della Regina d'Inghilterra (VII 14, 5.17–19).⁸ This house consisted of a large *atrium* towards the Via dell'Abbondanza and a reduced peristyle area at its back. Originally, the only portico was flanked by two large reception rooms at the eastern and western edges which underwent alterations in later times. The western *cenatio* was thus rebuilt as a workshop which again was primarily characterised by the separation of two different work areas. Accessible from the northern side lane (VII 14, 17), one entered a short corridor which was flanked by two deep basins on one side and a room on the other (see Fig. 13.11). The latter had a row of eight ovens. These were of different sizes and still preserve partial remains of the bronze cauldrons (see Fig. 13.12). As was demonstrated by recent investigations (Borgard 2002, 476–478; 2003, 18–24; 2005, 325–327), these workshops had been dyeing workshops and were built and run separately from fulleries. Behind this room, and accessible by a second independent entrance from the side road (VII 14, 18) there was a work area which consisted of a central oven, two flanking tables with large stone slabs and finally a single basin (see Fig. 13.13). Two further similar basins in the neighbouring corridor have already been mentioned, and a fourth and fifth one were present inside the reduced garden area. As in the workshop I 8, 19, these basins were much larger than in the so-called kitchen of the Casa dei Postumii. However, what is of more importance is the similarity between all three mentioned

workshops and the installation of large work tables with heavy slabs. Due to the combination with dyer's workshops in two cases (I 8, 19; VII 14, 17.18), we can assume that these areas were also used during the processing of textiles. Cauldrons for heating liquids and the use of fresh running water support this hypothesis.

A Painting of a Felter's Workshop

Although the placing of the workshop inside the kitchen of the Casa dei Postumii at first sight seems to suggest some kind of a small butchery, this interpretation is not entirely satisfactory. As a key argument for an alternative explanation, I refer to a well-known fresco that was minutely described by Spinazzola (1953, I, 189–195) on the facade of a row of three *tabernae* along the Via dell'Abbondanza IX 7, 5–7 (see Figs 13.14–15; Spinazzola 1953, I, 189–210, esp. 192 with pl. 2). Only the facades have been excavated so far. Thus, we lack any information about the interior space of the houses. The one which is of great interest here has three entrances with a central access to a smaller house flanked by two openings of *tabernae* at its left and right. Since the interiors of the *tabernae* have not been excavated, we have to rely on the paintings on the façade to reconstruct them. On both sides of the western opening (IX 7, 7) there are frescoes showing Mercury leaving the cella of his temple and Venus Pompeiana in a chariot drawn by four elephants. Beneath these depictions, and directly above the socle of the wall, are two scenes that show people working at wool and textiles and selling goods. Both depictions were later overwritten by electoral *programmata* (*Notizie degli Scavi* 9, 1912, 188 Nr. 29; *CIL* IV 7838, 7843, 7844). Above the heads of the single persons on the fresco to the right, we read *VETTIVM FIRMVM AED(ilem) QVACTILIARI ROG(ant)*, carefully written into the lacunae between them. *Quactiliari* as a vulgar form of *coactiliarii* seems to refer to an association of workers who in this case recommend voting for a certain Vettius Firmus as a future *aedilis*.⁹ The person on the far right who presents the final product of the workshop, a blanket-like piece of wool, is named *VERECVNDVS*. It is the only person named on the fresco, thus probably indicating him as the workshop owner. As already assumed by Della Corte, this man might be the same person who was called a *VESTIAR(ius)* in a graffito on a column of the so-called Casa di Epidius Rufus (*CIL* IV 3130; Della Corte 1965, 279–280).

The placing of the electoral program and the identification of the felters are consistent with the depiction. Three workers, fully dressed and sitting on stools at low tables, are engaged in combing and preparing the wool in the background. In the centre, we find four nearly naked workers, wearing only some kind of apron, standing on both sides of two wing-shaped tables. Both table-slabs are supported by light stands, a construction which seems fully removable, signifying that felting did not take place here all the time. Only the oven in the middle is of the type we saw in the aforementioned workshops with the walled-in cauldron and the opening below to fire it. Pieces of wood in front of the oven's opening confirm this reading. The workers are bare-footed which hints at the working process of felting where larger amounts of water were needed that might even have ruined the floor. The wing-shaped table-slabs with their rims and the outflows into the cauldron show that an attempt was made to minimise streams of running water on the ground. As fulling requires heat and soap, I assume that the long textile or wool pieces in the hands of the workers were taken out of the cauldron and then fullled. While fulling

and wringing out the pieces, the liquids ran back into the cauldron. If it were true that the two tables were removable, we may ask whether the oven too was to be put aside. In that case, Moeller could have been correct in identifying a hollowed cylinder of limestone in the workshop I 12, 4 as such a fuller's oven (Moeller 1976, 51–52 with fig. 6; pl. IX).¹⁰ The heat of the oven might then explain why the four men did not wear any clothing on their upper bodies.

Finally, this interpretation is strengthened by the smaller fresco on the left side of the opening (Spinazzola 1953, I, 207–210 with fig. 238). Although a later *dipinto* has obstructed a clear reading of the depiction, one can still observe a scene where goods are sold inside a shop. Spinazzola (1953, I, 189–195) has convincingly proposed a *taberna* where shoes were sold, probably those made of felt. In this case, the shop would have been flanked by two depictions that showed the production and selling of goods and thus functioned as commercial advertising stating the experience of the workers and the quality of the goods they produced.

By combining the central oven with its two flanking tables, the fresco repeats exactly what we saw in the three workshops discussed above. In reality, the position of the oven thus allowed every worker to individually take out the next piece to be fulled, a situation which is paralleled by the archaeological context in the Casa dei Postumii. Even when slightly altered due to the different spatial conditions in the workshops I 8, 19 and VII 14, 18 inside the Casa della Regina d'Inghilterra, this arrangement of ovens and tables directly points to its function as a fullery. In all three Pompeian workshops, the main characteristic had been the large tables which allowed workers to stand at both long sides. While they had to jump over the table in the Casa dei Postumii and in the workshop I 8, 19 to reach the rear side, the supports in VII 14, 18 had a passage beneath the tables.¹¹ Therefore, these tables were supposed to be worked at from two sides as demonstrated by the fresco. What has still to be explained are the missing basins in the wall-painting. I can suggest some reasons for it. Firstly, it is obvious that the depiction is composed in a way that facilitates its reading. The painter has placed the most characteristic processes of work, the fulling and felting, directly in the centre of the scene while four additional persons are situated on both sides. The composition of the fresco is laid out very clearly so as to achieve a higher degree of readability and become more representative, demonstrating the organisation of working and selling. Thus, sitting or standing frontally towards the viewer, they lend a certain expression of conspicuousness to the depiction. Their positioning, however, does not represent the usual interior of workshops which often had to cope with spatial limitations. What we see here are those manufacturing processes that more or less needed specialists with a certain experience. The rinsing of fulled or felted objects in the basins on the other hand did not require the same expertise and might therefore have been omitted here, all the more so because rinsing was not a characteristic work of felting alone. Fulleries and dyeing workshops also had basins for cleansing textiles so that the 'forgotten' basins in the fresco would not have been necessary for the viewers to identify the scene as a fuller's workshop.

Finally, the interpretation of the three Pompeian workshops is confirmed by the neighbouring dyeing installations in I 8, 19 and VII 14, 18. Both workshops are directly linked to a dyer's workshop, spatially and technically. Hence, the ovens in the courtyard of I 8, 19 as well as the oven in the hall downstairs were provided by the same system of *fistulae*. We should, therefore, assume that both trades

supplemented each other. Since dyeing workshops have been reinvestigated and convincingly interpreted in recent years, I do not hesitate to identify the above-mentioned three factories as felters' workshops.

A Temporary Workshop Area?

Returning to the Casa dei Postumii, the function of the northern part of the kitchen still needs to be explained. As I mentioned earlier, there are no installations which provide us with any hint for the usage of this space. It is only from a fresco of the well-known fullery at VI 8, 20 that we can gain an idea of what the stands that served for drying the cleaned, dyed or fulled items looked like (see Flohr fig. 12.9 in this volume; Fröhlich 1991, pl. 22, 1). Blankets and larger pieces, such as cloaks and capes must have been quite heavy after the rinsing which made strong stands necessary and required large spaces. Therefore, the vicinity of Pompeian fulleries and the felters' workshops to porticoes and garden areas might have been chosen deliberately. As for the felting, we only know of the garden of the Casa della Regina d'Inghilterra where two additional basins had been constructed. In the Casa dei Postumii, the access to the inner courtyard of the peristyle was blocked by a *pluteus* (Fig. 13.16) which also visually separated the workshop area from the garden with its marble fountain, table and statuary. At first, it was only the northern part of the kitchen that seemed to have been left for use as drying space. However, as mentioned earlier, there is the southern end of the eastern portico that did not give access to any other living room, although it was wider than the other porticoes. It is noteworthy that in his excavation report Fiorelli described traces of a wooden fence between the two columns there (Fiorelli 1861, 54). Hence, the *pluteus* continued as a wooden barrier towards the south-eastern corner of the peristyle. Even from here, any access to the garden was made impossible. However, any precise explanation of why this was done is difficult. Nevertheless, there are certain reasons that lead me to suppose a temporary function of that space as a drying area for felted objects. The extension of the so-called kitchen to the south was realised – as far as may be ascertained – without any recognisable limitations. Its south wall halves the possible length of the portico – in relation to the western one – and thus the workshop and southern portico acquired nearly the same size. Separated by a door and the wooden *pluteus*, the so-called drying space formed the furthest end of the house for all who were allowed into the rear part of it. However, it was also only an additional space of minor importance, especially when considering the main reception area of the *domus*. Its accessibility from the workshop is, of course, also connected with services to be offered from the kitchen where the preparation of food was organised. It is highly likely that the slaves used the corridor to the south and the doorway, and did not walk around the entire peristyle to reach the large living rooms at the back of the house. However, at times when no guests were invited and no *amici* expected to be welcome in the *cenationes*, this area offered the opportunity for use as a secondary workshop. Remembering the significance of views guiding into and through the Roman house, it is noteworthy that, in the case of an opened *tablinum*, no one in the *atrium* would have noticed the drying stands in the eastern portico. Hence, its size and placing, the separation by a fence and its connection to the kitchen made it well adapted as an area in which to place removable stands. I therefore suggest that the remarkable and unusual spatial organisation of the eastern part of the

peristyle was by no means accidental.



Fig. 13.16. *Casa dei Postumii* (VIII 4, 4. 49), pluteus in the north-eastern corner of the peristyle. (Photo: Jens-Arne Dickmann).

A closer view of the entire ground plan of the *domus* indicates that the felter's workshop inside the kitchen also caused disadvantages to the owners (Fig. 13.17). To reach the workshop from outside the house, for example by the *posticum* 49 as might have been usual for all workers, the peristyle had to be crossed in its total width. Although we are not able to reconstruct the details of everyday life in the *Casa dei Postumii*, it seems very probable that, from its very beginning in AD 62, entertaining guests in the rear part of the *domus* and any use of the workshop must have taken place at different times. Otherwise the people moving about, the noise and smells would have annoyed the guests and disturbed their expectations for *otium*.

Production and Trade

The similarity between the felters' workshops is astonishing, primarily the size and location of the tables. Keeping the Verecundus fresco in mind, we can allow ourselves to think of at least four workers per table and thus eight men in the Postumii workshop. Other persons, women and/or children, might have performed less labour-intensive tasks like combing the wool or rinsing the pieces. We cannot know if all of them belonged to the *domus* and where they lived.¹² Instead, the question may be asked why the owner of the *domus* had decided to install the workshop and how and where the products were sold. Economically, it seems a dubious decision. Since small objects of felt – remember the small basins for rinsing – like shoes, gaiters, gloves or caps were mainly worn in winter, it is questionable whether producing goods of felt took place during the entire year.

Moreover, if this were the case, it remains doubtful whether they were sold from the springtime onwards. However, as seasonal goods attractive in the cold period of the year, they offered an opportunity for an income when agricultural products became rarer or fell short and could no longer be sold. The calculation behind the owner's decision therefore might have been to cope with the difficulty of earning an income during the winter months. This suggestion is based on the assumption that the felted goods were sold directly to the inhabitants of the town, and not produced for an export market and thus sold rarely but in large amounts. On the outskirts of the Casa dei Postumii, along the side roads, there are at least six or seven *tabernae* which belonged to the same estate as the *domus* itself.¹³ One of them (VIII 4, 2–3; see Fig. 13.1) in its final phase had become a double *taberna* and at the same time was connected to the main *domus* by two doorways leading into the *atrium* and into the neighbouring *cubicula*. While we do not know the arrangement of the interior fittings of the eastern shop, beam-holes in the walls of the western *taberna* indicate that this room in its final phase had a shelf running along the three walls. The annexation of this *taberna* was probably to create a small storehouse for goods. The remarkable size of the shelf might suggest that goods had to be stored for a long period. Even if this remains purely speculative, it is consistent with the idea of a shop in which seasonal goods were offered for sale, which at the end of winter had to be stored until the next cold period.

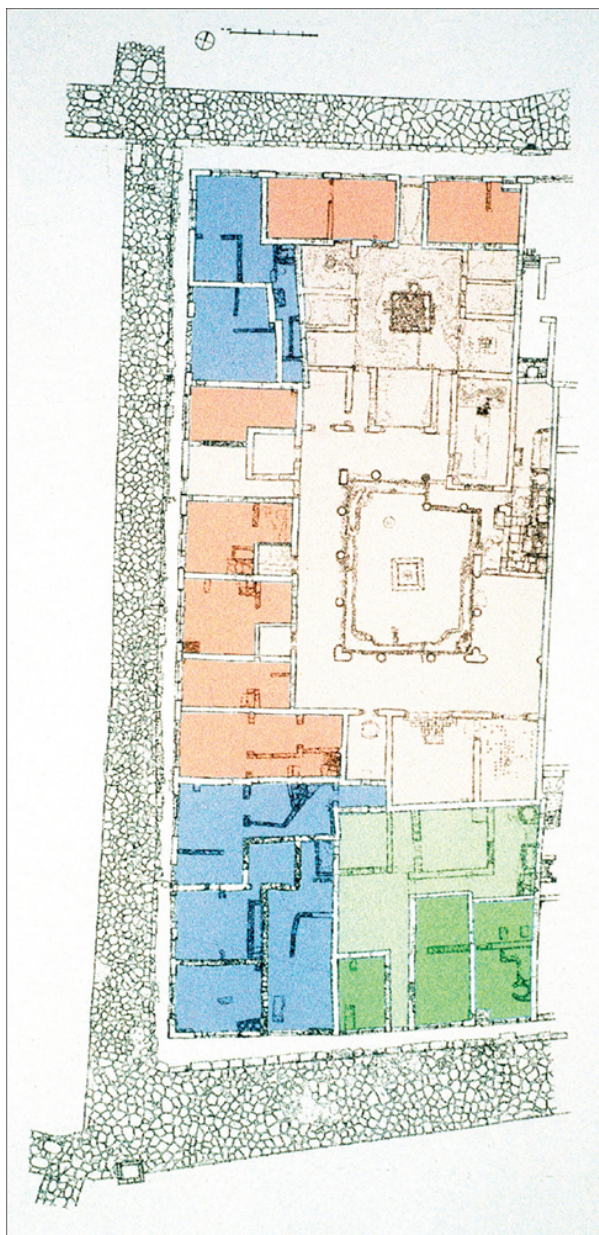


Fig. 13.17. *Casa dei Postumii* (VIII 4, 4. 49), ground plan with coloured property areas. (Map: Jens-Arne Dickmann).

As for the decision to have a workshop inside the *domus*, the number of *tabernae* on the outer edge of the building is noteworthy. In contrast to the *Casa della Regina d'Inghilterra*, the owner of the *Casa dei Postumii* disposed of a series of

shops that were well adapted to the selling of felted objects produced in his workshop. Apart from agricultural produce in the warmer periods of the year, he thus secured steady revenue of ready cash during the winter.

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1 See also Fiorelli 1873, 3, stating “la cucina con le sue dipendenze (r), che ha il gittatoio o *latrina* presso il focolaio, tiene un banco o grande tavola di marmo, una vasca di fabbrica, una piccola nicchia pel domestico Lare, ed una grande fornace”.

2 First mentioned by Fiorelli 1861, 52–53; see also Overbeck and Mau 1884, 294–295.

3 The garden most probably will have also been planted, even if we cannot give any details (for some ideas of typical garden layouts, see Dickmann 1999, 347–358; Jashemski 2007, 487–496; for the replanted garden of the Casa dei Postumii, see Jashemski 1993, 212 with fig. 246).

4 The remains of the oven walls were evidently restored in an unknown period after the excavation and make it difficult, if not impossible, to ascertain their precise measurements.

- ⁵ Another and longer fragment of the same lead pipe was found entering the kitchen under the threshold.
- ⁶ This big channel which originally had a height of c. 1.5 m and a width of c. 0.95 m runs down from the Stabian Baths to the theatre and further on to the southern edge of the city hill to drain its liquids into the lowlands beyond.
- ⁷ Recently again identified as a *tinctoria* by Borgard 2003, 19–23; Borgard and Puybaret 2003, 307–309; Borgard 2005, 325–327.
- ⁸ For recent literature, see preceding footnote.
- ⁹ The same *coactiliari* are met only a few metres to the east, on the same facade and in this case recommending people to vote for a certain Herennius and Suettius as *aediles* (*CIL* IV 7809; NSc 1912, 136).
- ¹⁰ In contrast to all the other ovens, this one was made of limestone. Its precise function has to be investigated once more. For instance, it seems doubtful whether it could have taken a cauldron.
- ¹¹ In my opinion, there is no doubt that the rear part never was a basin or a container for fluids.
- ¹² This will be discussed in the final publication of the investigations in the Casa dei Postumii, to be edited by F. Pirson and the present author.
- ¹³ These are all the shops that are highlighted in red; a more detailed discussion will also be presented in the final publication of the Casa dei Postumii. For a recent and lucid discussion of the spatial organisation of workshops and their *tabernae*, see Flohr 2007, 132–142.